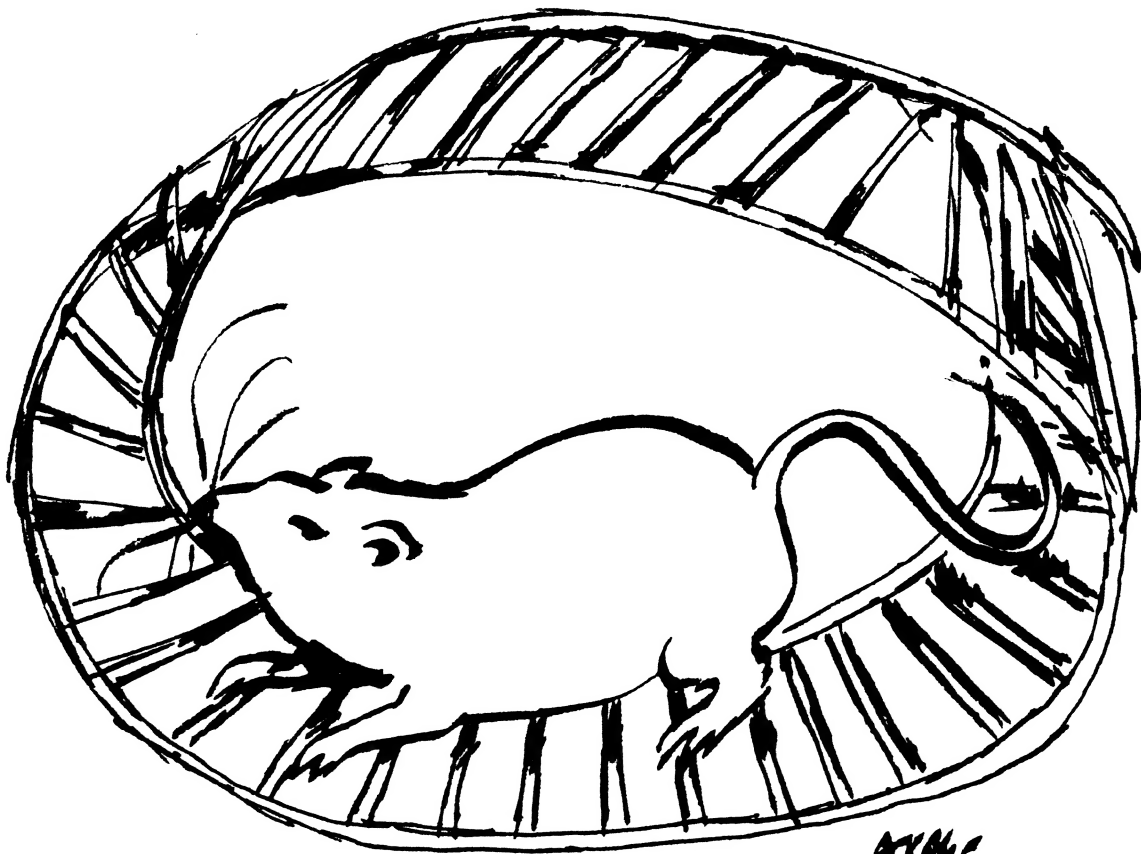


ADTECH

♦ THE OFFICIAL ORGAN OF
GENERAL TECHNICS ♦



YET ANOTHER VARIATION ON
THE RAT RACE.

OCTOBER 1988

THE 555 TIMES

A P A - T E C H 6 1

The Amateur Press Association for General Technics

G.T. Buckfast
+ Shalmaneser

Greg Ruffa, 1004 7th Street, S.E., #103,
Minneapolis, Minn. 55414 (612)-379-9622

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total: 49

The minimum required activity is two pages every four months.

The copy count for the APA is twenty (20).

The deadline for APA-TECH 62 is Thursday, December 1st; I skip town on the 11th, so don't be too late...

I have at last been able to update the accounting. If you are under \$3 before this issue was mailed, please send money. Dave L., Linda, Donna & Tullio, Bob & Connie, Guy W., and Rolf REALLY oughta send in a 'zine next time.

Your account, before postage, stands at:

- \$9.88

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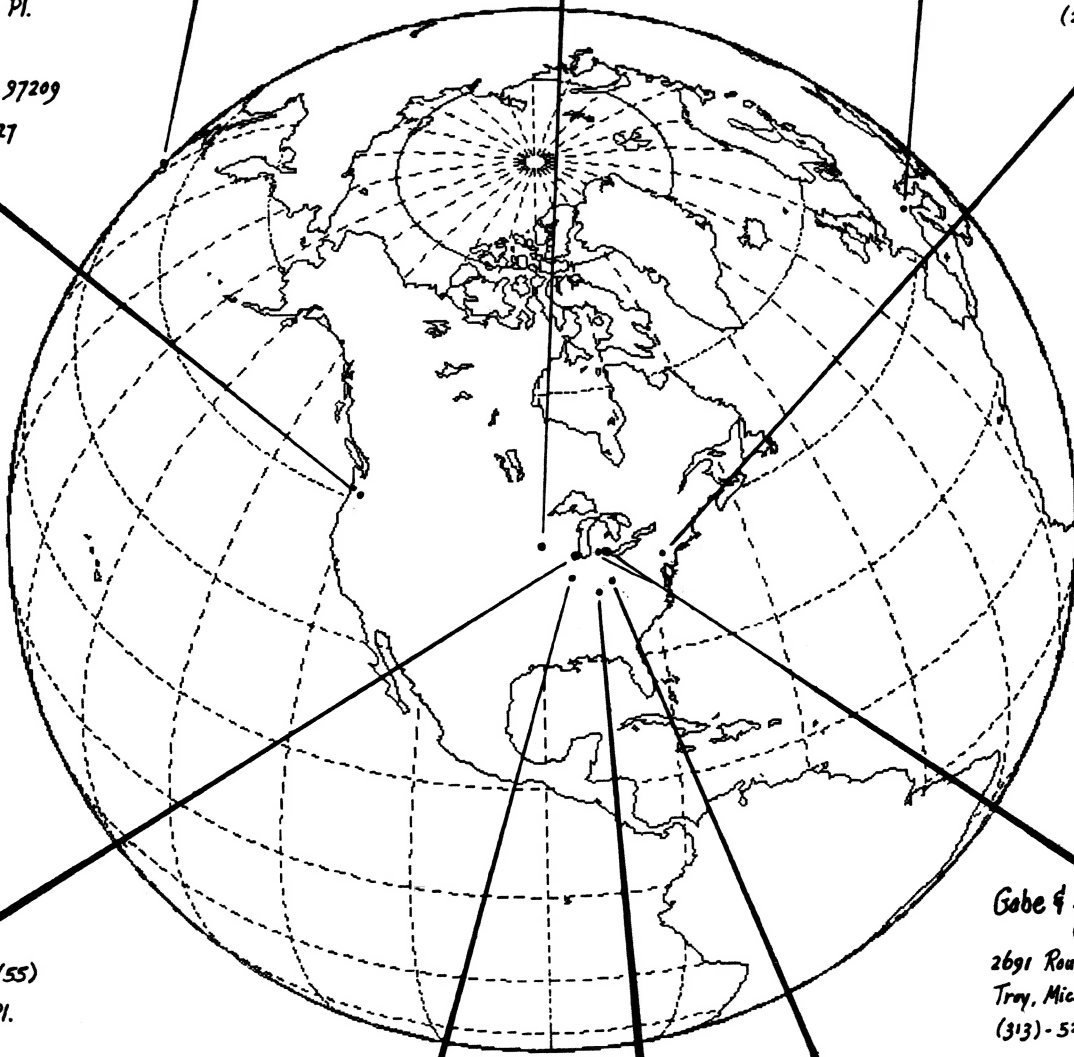
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... Dr. Gonzo's Bits ...

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...

:: Valli Hoski, Via Gen. Guisan 21a, 6830 Chiasso, Switzerland ::

ApaTech, September 1988

I am using an Italian keyboard with letters in the oddest places, especially the Z, W, and M. So I keep typing zith instead of with and ,ay instead of may. But I guess they have a reason. There are also those interesting characters for the Latin based languages, like á,é,í,ú,ç, and the good old \$, whatever that is good for.

Reggio Emilia, of small, sweet, Communist Roman towns

Reggio-Emilia. Not to be confused with Reggio-Calabria, which is the city down in the tip of the boot that is about to kick the football of Sicily, and is the sister port to Messina (Sicily) which is where you get the boat from the mainland to Sicily; Reggio-Calabria and Messina were also written about in the Greek classics by Homer, as Scylla and Charybdis, two mountains who came together and squashed the boats going through the strait between them. So now you know where Reggio-Emilia is not.

Where Reggio-Emilia is, is right on the Via Emilia (about 25 miles north of Bologna.) That is the same Via Emilia built by the Romans from Rome north towards the Po Valley. The Romans liked to build roads to places from Rome, like Via Appia, of the Appian Way pizza mix fame. Well, there is no Emilian Way pizza, but there is plenty of wine. Lambrusco is a local specialty, and I've been told that the deep red sparkly wine available here is delightful.

But why Reggio Emilia? During early July I've been working at the office in Verona and the client in Reggio Emilia. Well, that same road, Via Emilia, curves past the front of the client's office here, and meanders on north and south, more or less. It's probably not much wider than it was originally. Medieval and slightly more modern (say, around 1600) buildings line the street on either side. This central zone is closed to traffic at certain hours, and the local traffic seems light, so it is actually quite pleasant. People go about on bicycles or by foot. The streets are not asphalt paved, but lined with large blocks of granite, about 24 inches by 24 inches (by 5 inches deep). Riding a bicycle on these blocks is quite a challenge, and one has a tendency to sort of bounce over them, with one's teeth (and parcels in the basket) rattling.

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September 1988

Page 1 of 5

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...	...
...	... Dr. Gonzo's Bits ...
...	...

Then there is the food, of course. There is the pasta specialty at the Duca Bianco that arrives in front of you, a blue black mound of pasta, topped with a dot of red caviar. The pasta has a wonderful taste with a salmon sauce, but that does not account for its color. We have pondered this in the office and someone suggested that it is calamari or squid that makes the pasta unique. But it still tastes fine. The restaurant is in a fine medieval location as well, in a cavernous basement with brick arches for a ceiling. You can still see the antique brickwork in spots, and you realize that this isn't trendy old, this is authentic old. This was probably the wine cellar of an old villa.

Speaking of villas, the hotel I stayed at this week is a restored medieval villa. And is one of the oldest hotels in Italy. It was founded around 1515. It gives you a good idea of what an old villa here looks like, as well as Reggio Emilia.

Speaking of more villas, the client's office is an old villa, which has been somewhat modernized. This is a major local bank, who has made quite an impressive headquarters out of a villa. The main customer areas and office rooms are all renovated great halls, with elaborate plasterwork, painting and details on the walls that you would expect of such a villa. In the data processing work areas, it is a bit more modern. But if you dig far enough into the basement here, as well as the Duca Bianco, you will probably find some sort of Roman ruins. Italy is like that, you know.

Il Pendolino

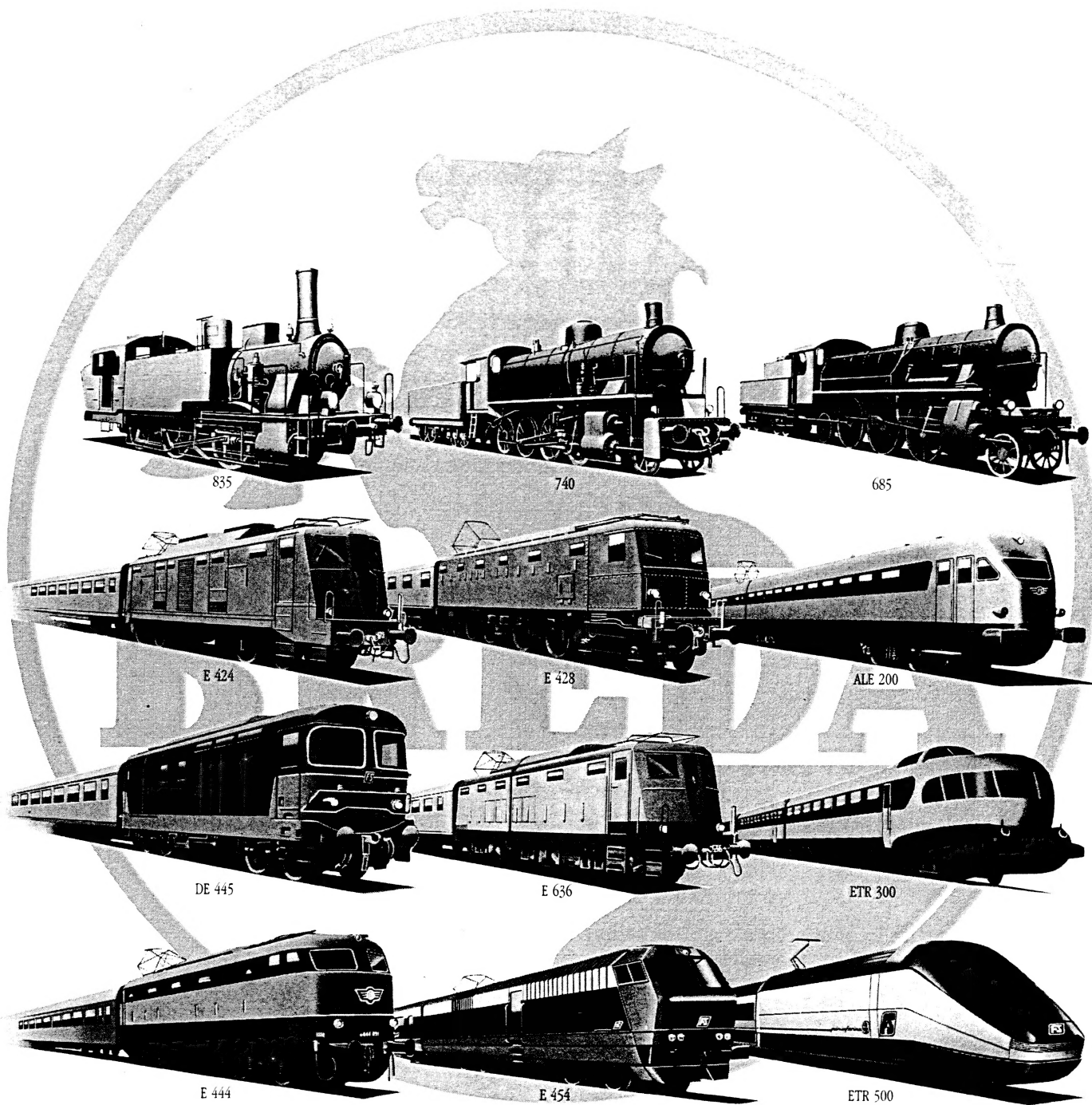
Remember sometime ago, when I said that railroads here are a necessary and integral part of life? The ETR 450 and ETR 500 are two very moving and dynamic developments in rail service here in Italy.

Milan/Rome is the vital corridor for internal rail, air and road traffic. Morning, afternoon and evening you can catch a train hourly for Rome from Milan's Stazione Centrale. And now you can go nonstop, 600 kilometers, in 3 hours and 58 minutes. The ETR 450 is the new nonstop, high speed (alta velocita') train providing competitive Milan/Rome/Milan service. The technology behind the train involves sections of specially levelled and graded high speed track, uniquely designed trucks (wheel frame and assemblies) and suspensions to allow independent pendular movement of the carriages and enhancement of the track's overhead electrical catenary to provide constant, intensive power to the line. Built by Fiat Ferroviaria (and others), the ETR 450 represents the latest in passenger service in Italy.



● Prendono forma i primi servizi ad alta velocità delle FS: dal 29 maggio gli ETR.450 collegano Milano e Roma senza fermate intermedie in 3 ore e 58 minuti, mentre fra breve avrà inizio un ciclo di prove in linea del treno sperimentale ETR-X.500, che degli ETR.450 sarà il successore negli anni novanta. Riuniti in questa immagine i due treni ad alta velocità a Roma Tiburtina il 18 aprile, alla vigilia della presentazione ufficiale dell'ETR-X.500 (foto B. Blasi).

At the same time, the ETR 500 represents the immediate future for high speed rail by the early 1990s. Especially planned for traffic movement during the world soccer championships in the early 90s, the ETR 500 is being tested and developed now. Coinciding with the official startup of the ETR 450 service, the ETR 500 locomotive tests and demonstrations were held this past May. Designed by Pinifarina, the unique profile of this train pulls your vision towards the future and seems eager to move people now, not in 3 years. Why the ETR 500 and not an expanded service of the ETR 450? The ETR 450 is a fixed length train without separate locomotives; much like Amtrak's TurboLiners (Detroit/Chicago service during the mid-70s), the ETR 450 cannot have passenger cars added to its fixed length - it can run with fewer than five or seven cars, but not more. The ETR 500 represents new locomotive technology and design, and will be able to run not only on the new high speed lines, but also the older, traditional rails. Optimistically, its projected speed is 275 km/hr. The ETR 500 is being lauded as Italy's answer to the French TGV and Japanese Shinkansen and is backed by a consortium including Breda (see the franked ad), Fiat, Ansaldo and Tibb.



BREDA. CENT'ANNI DI LOCOMOTIVE.

Cent'anni fa la prima locomotiva Breda usciva dallo stabilimento milanese sul Naviglio.

"Il mostro gitta il fischio che sfida lo spazio" cantò il Poeta e la locomotiva divenne il simbolo della "spinta in avanti", della corsa allo sviluppo, della crescita industriale del Paese.

Da allora la Breda ne ha fatta di strada: dall'ansimante vaporiera al traguardo delle mille locomotive prodotte già nel 1908, dal "Settebello" alla progettazione dei treni ETR che raggiungeranno i 300 km orari.

Sui mezzi di trasporto contrassegnati con il cavallino rampante rosso ormai si viaggia un po' ovunque: Roma, Milano, Cleveland, Washington, Seattle e in tante altre città. Non sono soltanto locomotive di ogni tipo ma anche elettrotreni, metropolitane, "Light Rail Vehicles", carrozze, carri merci, autobus e filobus.

Oggi, il Gruppo Ferroviario Breda, costituito nell'ambito dell'AvioFer Breda, finanziaria dell'Efim, è una delle massime concentrazioni mondiali del settore mezzi di trasporto con cinque aziende

costruttrici di materiale rotabile: la Breda Costruzioni Ferroviarie a Pistoia, la Sofer a Napoli, l'Omeca a Reggio Calabria, la Ferrosud a Matera, l'Imesi a Palermo; a cui si aggiungono, nella stessa finanziaria, l'Avis a Castellammare di Stabia (riparazioni) e la Cometra a Messina (componentistica). Un insieme organico di strutture produttive in grado di offrire ai mercati nazionale ed estero soluzioni tecnologicamente avanzate per un trasporto più comodo e sicuro, nel rispetto di una tradizione che guarda costantemente avanti.



GRUPPO FERROVIARIO BREDA



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::: Dr. Gonzo's Bits :::

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Rather than only talk about these trains, you can read about them and look at the pictures. Franks for this issue are courtesy of the monthly magazine of the Italian National Railway, VdR (Voci della rotaia) and two rail enthusiast magazines, Tutti Treni and Mundo Ferroviario. At the very least, you should be able to look at the pictures and see where railroad technology is still advancing and flourishing as an ongoing concern. Read and hope, Amtrak.

She wore ... an itty, bitty, teeny weeny ... at Rimini

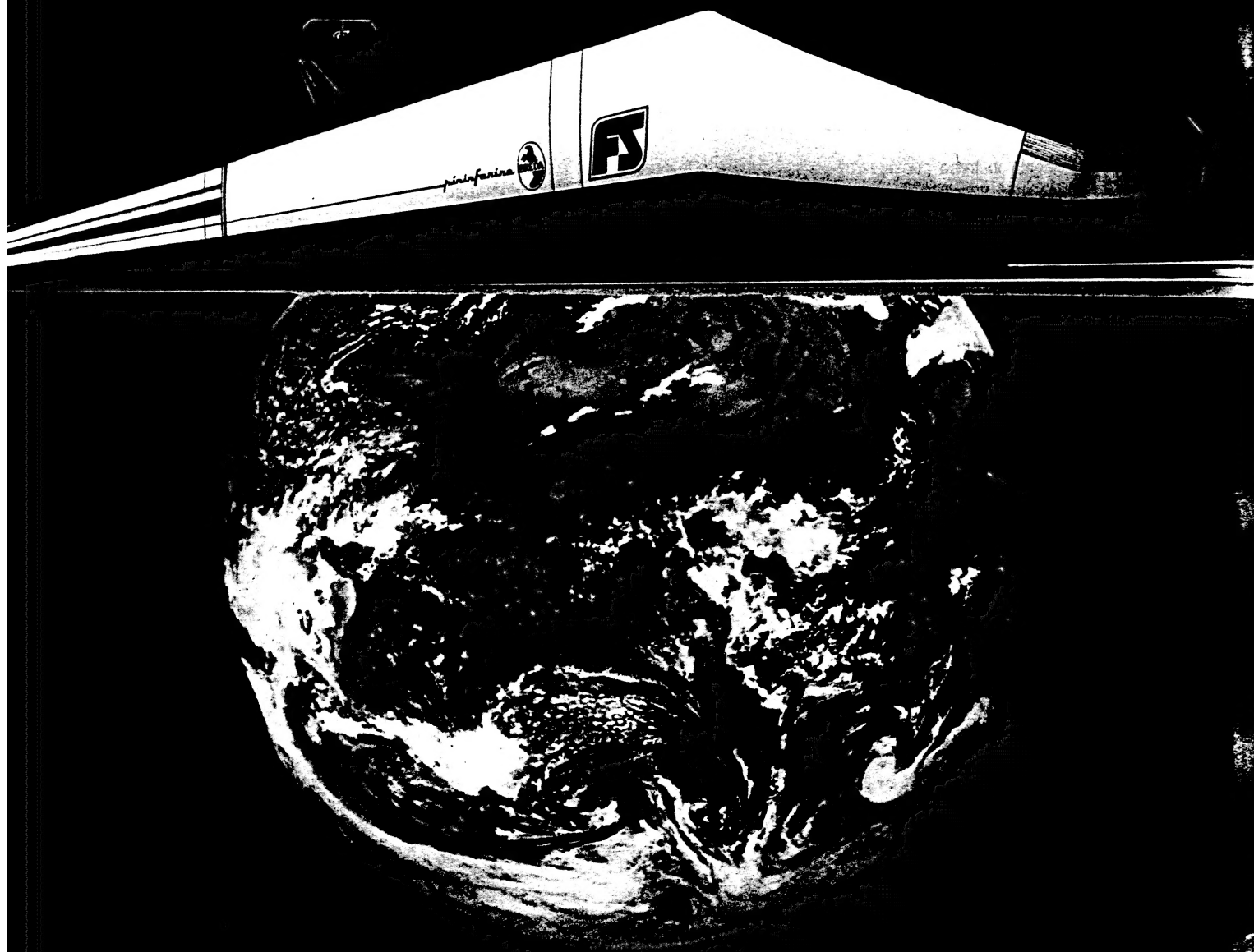
I've found the best beach and beach town in the world - Rimini. Blue skies, cool breezes, warm sea, great bodies and a godlen sun that doesn't burn. Evenings full of promedanding people, sidewalk cafes, still cool breezes, sidewalk bortiques and almost anything you can think of to do outdoors - rollerskating, cruising, bicycling (tandem and even 4 person models). Or sitting, eating ice cream and enojoying the world's oldest hobby - watching other people as they watch you. In an ambience where the worst possible deed seems to be pickpocketing. The only huckstering occurs with those seemingly indefatigable guys who used to hustle Moroccan carpets and how pander SOny fakes and sari-sized beach towels.

Rimini isn't as tacky as I'd thought. Full of tourists as the sign-bedecked cafess indicate English breakfast, German beer, Danish coffee. But hey folks, this is reasonable, affordable for the family but still chic. This isn't Blackpool- or Atlantic City-dreary. This is still well-dressed but no as upscale as James Bond.

Bill Higgins, you are excused from reading this section. The rest of you can go away scandalless, if you like, but turn the page quickly.

Meanwhile back to the sunsoaking Valli. So I enjoyed myself, Joa too. The sun and breeze has never seemed so warm and friendly. And I even got to go topless in a most inconspicuous fashion. (Look my fellow female GTers, it's wonderful. I don't know why we have to put up with sticky, sweaty swim suit tops at the beach, if we don't want to. But then again, people don't gawk on Mediterranean beaches. They do gawk in Great Britain.) Anyway, come to Rimini, I'll go with you anyday.

UN TRENO PER VOLARE



ETR 500

Oggi l'antico fascino del treno è la magia di un volo senza mai staccare le ruote da terra.

L'ETR 500, concepito per il "Sistema alta velocità" delle FS, è la perfetta integrazione delle conoscenze e tecnologie d'avanguardia sperimentate nei diversi comparti della progettazione di un treno superveloce.

L'aerodinamica, studiata nella galleria del vento,

la struttura, gli intercomunicanti, le installazioni, gli accessori, l'arredamento e il condizionamento dell'ambiente sono stati selezionati per un viaggio non soltanto rapido ma confortevole e sicuro, anche alla velocità di 300 chilometri orari.

Un nuovo treno di prestigio per le FS, ancora un'affermazione BREDA.



GRUPPO FERROVIARIO BREDA



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... Dr. Gonzo's Bits ...

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More Travel Stories

So, let me continue my stories of the cities that I have been in recently. Like I mentioned earlier, during early July I've been working at the office in Verona and the client in Reggio Emilia. Being in Verona is always nice because Joa is usually there and we stay at his company apartment. It's on the 10th floor, has balconies but they are not connected to any other apartment. So we are able to leave the windows and balcony doors open all evening long and get the breezes. This is important in a country where air conditioning does not exist in apartment buildings. And there is a local armed forces radio station that broadcasts in the vicinity of Verona, so I can even listen to the American news in English! (Or to a baseball game, if I feel like listening to the radio at 2:30 AM.)

Oh, the weather. In the midst of the midwest's great dry spell, last weekend there was a wind and hail storm in Milan that knocked trees down, toppled over an old wall and smashed cars. When I saw the pictures in the papers, I first thought that a tornado had hit. But there aren't tornadoes here, just these incredible storms. During the storm, we were in Verona, on the 10th floor, and I heard the wind howl like a banshee, raising the hair on my neck and Joa said that I quite visibly paled when the wind howled. It was really quite an eerie feeling. At least we were inside and not driving.

Then there is Milan. We spent a Saturday and Sunday driving around the local quarters quite a bit. I actually found one quarter that I really like, the first neighborhood that struck me as homey in Milan. This is Quartiere Feltre, named after its main street. There are mostly brick apartment buildings in clusters, about 4-5 stories high. There are lots of trees, people about and sort of a friendly feeling. It is actually quite new, probably was built in the late 60s or early 70s. And I felt right at home, surprisingly so. It's not a particularly American spot, but one could consider it suburbanish. It is really close to a major park, Parco Lambro which has woods and everything. But this being Milan, it is probably impossible to find an apartment there. Someday, but not immediately. (We aren't in dire need of an apartment here, but we do look when we see a place listed that seems convenient or otherwise; someday we might be in the right neighborhood at the right time.)

That's all for now, please take care, Valli.

ETR 500 X: IL FUTURO È COMINCIATO

È USCITO ALLO SCOPERTO PER PRESENTARSI A TUTTI. E GIÀ DAL PROTOTIPO X, L'ETR 500 HA CONFERMATO LE ATTESE. È BELLISSIMO. MA SOPRATTUTTO È UN GIOIELLO DELLA TECNICA.

di **MARINA DELLI COLLI**

**ALTA
VELOCITÀ
ITALIANA**

Hanno detto e ripetuto più volte che non è un treno d'élite, eppure alla presentazione ufficiale del prototipo dell'ETR 500 l'élite ferroviaria c'era proprio tutta. Ed era giusto fosse così perché l'ETR 500 non è solo un treno bellissimo ma è anche quanto di meglio, tecnologicamente, oggi l'industria italiana possa offrire.

È il presidente Ligato, presentandolo con giusto orgoglio, ha affermato che questo treno è la dimostrazione lampante che se qualcuno nutiva dubbi sulla serietà dell'Ente ora può cominciare a fare marcia indietro. "Le difficoltà di ogni giorno — ha detto Ligato — non ci hanno fatto perdere di vista la strategia e infatti nell'86 abbiamo bloccato il degrado, nell'87 abbiamo avuto la prima impennata e speriamo di continuare così. Non è lontano il giorno, e l'ETR 500 lo dimostra, che si correrà sulla terra come nel cielo".

Parole chiare, precise queste del Presidente, che dimostrano quanto le ferrovie puntino sul nuovo treno.

Ma vediamo più da vicino questo ETR 500, questo treno italiano a grande velocità, costruito da un consorzio di firme prestigiose quali la Breda, l'Ansaldo, la Fiat, la Tibb.

Con l'ETR 500 diventa realtà la prima fase di quel "Programma nazionale per l'alta velocità" indicato come obiettivo strategico dal Piano generale trasporti e, con legge, dal Parlamento italiano. "L'alta velocità italiana — ha detto tempo fa l'ing. Cavagnaro, direttore dello staff FS che progetta la rete alta velocità

— nasce come un sistema. Non è semplicemente la costruzione di nuove linee e di nuovo materiale rotabile, è l'impostazione di un nuovo servizio di trasporto che estenda il più possibile i benefici offerti dagli ingenti investimenti".

E, infatti, l'ETR 500 dovrà marciare con elevate prestazioni sulle linee di nuova concezione e con prestazioni superiori a quelle dei convogli tradizionali sulle linee esistenti per permettere la più ampia flessibilità del servizio: non un treno destinato a clienti di lusso, un po' yuppies, bensì un treno destinato al trasporto di massa, concepito per offrire una notevole disponibilità di posti per convoglio (500/700), per formare una flotta e non un piccolo numero di treni di élite.

A questo treno verrà trasmesso un flusso continuo di informazioni che gli consentiranno di "vedere" la linea, di sapere dov'è il convoglio che precede e quello che segue e di che tipo è (lento, veloce, più o meno capace di frenare ecc.) e che ne faranno un treno "intelligente", un prodotto della migliore "meccatronica", che conosce a memoria caratteristiche di linea ed orari, comunica ininterrottamente al sistema la sua posizione, la sua velocità, il numero di passeggeri a bordo. L'ETR 500 è il terminale di un sistema completo e integrato che si occuperà di prenotazioni, emissioni biglietti, ordinazione dei pasti o magari del taxi e dell'albergo all'arrivo.

Detto questo, è evidente che la sfida sul

terreno dei "superveloci" all'insegna della rapidità e del comfort è una sfida vincente.

Attualmente, nel mondo, sono tre i treni superveloci.

L'ICE (Inter City Experimental) in Germania, il TGV in Francia e lo Shinkansen in Giappone. Di questi, il primo è ancora un prototipo e il secondo è senz'altro prestigioso d'immagine ma antieconomico. Per sfruttare al massimo la sua potenza, infatti, ha bisogno di una linea costruita su misura: su quelle tradizionali l'utilizzo non copre il costo. Quella giapponese, invece, è più potente dei suoi "fratelli" europei ma paga lo scotto di una minor comodità e qualità.

Dunque, l'ETR 500 non teme rivali: 27 km/h sulla Direttissima ma anche utilizzo sulle linee tradizionali, con una velocità nettamente superiore a quella degli attuali Intercity.

Il design, poi, di Pininfarina, ne ha fatto un prototipo dalla linea aerodinamica di grandissimo fascino ed effetto. Nuova è la struttura delle casse, nuova la disposizione delle apparecchiature, nuova la carenatura, nuovo il sistema di condizionamento d'aria, nuovo il sistema dell'impianto telefonico, nuova la bagliera.

Insomma, l'ETR 500 è un vero e proprio gioiello della tecnica, un treno finalmente nuovo al servizio di una ferrovia nuova. Una ferrovia che allineerà l'Italia ad una Europa che punta, oggi più che mai, su un servizio ferroviario moderno ed efficiente come asset portante dei trasporti del futuro.



tutto TRENO

LO SPETTACOLO DEI TRENI

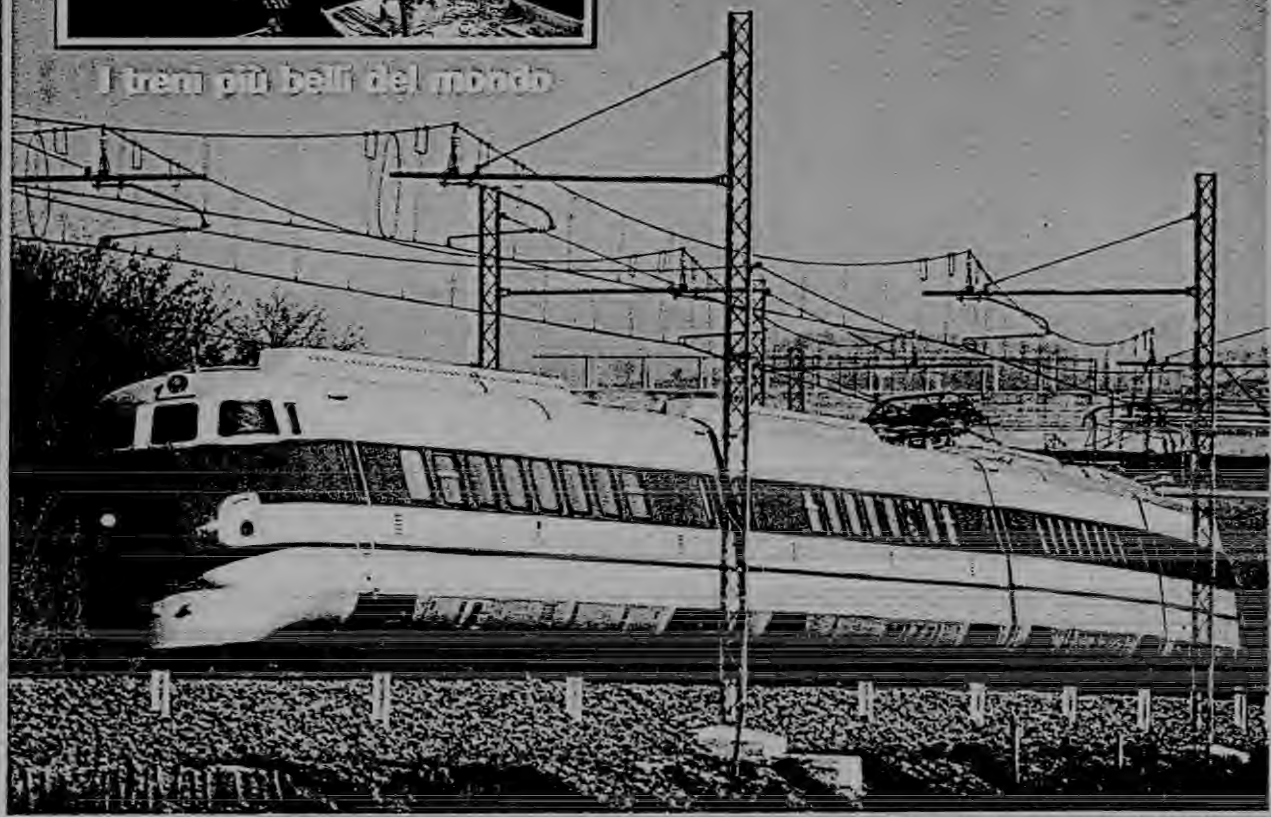
LUGLIO AGOSTO 88 / N. 4



I treni più belli del mondo

ORIENT
EXPRESS

DOVE NASCE
L'ALTA VELOCITÀ



La Brindisi
Fasano

Scala N.
"La miniera"

Invecchiare
i carri



ETR 4

Elettrotreno sensazioni, sino Dalla leggenda e bello, questo elettrotreno sta per l'Ente FS di elettrotreni ad as la messa a punto chiederà ancora definizione dell le relazioni prev no e Roma. Ron prire, con le con lazioni della per programma ad lunga preparazio pegno umano e j Pendolino sigr tecnico, riperc nata vent'anni l aspetti poco cor capire quello che no. E' anche un' sguardo alla filo: zienda leader n ferroviario. Per c i protagonisti. F Ferroviaria a To settore ferroviari vede più la dizio contrato il Signo bile della Direzio ni esterne, al qu ci della produzi prospettive futur l'azienda.

La produzio Morte- è essenzi 450, che finirem le D 145 di serie la Ferrovia Cer gruppo ALn 663 no in produzione to, tipo MU, i pro tram a piano riba

DOVE NASCEL' A VELOCIT.

VIAGGIO ALLA FIAT

i carrelli e la trasmissione degli ETR Y 500. Stiamo poi lavorando ai progetti di quelli che saranno i mezzi su rotaia degli anni '90: tram, elettrotreni suburbani, treni crociera, senza dimenticare la "carrozza leggera" modulare finanziata con fondi CEE equipaggiata con il nuovo carrello a ruote indipendenti di concezione Fiat.

Vi sono prospettive al momento attuale per eventuali ordinazioni da parte di amministrazioni ferroviarie Estere?

Sono in corso diversi contatti con ferrovie estere, in quanto recentemente abbiamo partecipato a gare di appalto internazionali: il Pendolino, poi, ha dato buona prova di sé in Germania e in Austria, dove erano presenti come osservatori anche tecnici svizzeri. E' però ancora prematuro prevedere eventuali ordinazioni, perché i contatti e le trattative non sono ancora conclusi. Resta comunque il fatto che le nostre soluzioni tecnologiche riscuotono un vasto interesse da più parti.

In quanto sono espressione di una "produzione di qualità..."

Diciamo meglio: di una concezione innovativa del mezzo su rotaia, anche con gli aspetti più impegnativi che ciò comporta. Produrre e consegnare all'esercizio in circa diciotto mesi un Pendolino implica certamente dei "rischi" superiori rispetto ad un veicolo tradizionale, però noi puntiamo - lo ripeto - verso una produzione innovativa, che comunque non esclude di dedicarci anche a prodotti più ripetitivi. Innovazione significa in ogni caso potersi valere di una esperienza di ricerca pluridecennale continuamente affinata attraverso forniture qualificanti come l'ETR 450, a suo tempo i carrelli Eurofima ed altre ancora.

Rimanendo sul tema Pendolino, per quali motivi vi è stata una riscoperta dell'assetto variabile, quando invece tale progetto sembrava ormai tramontato?

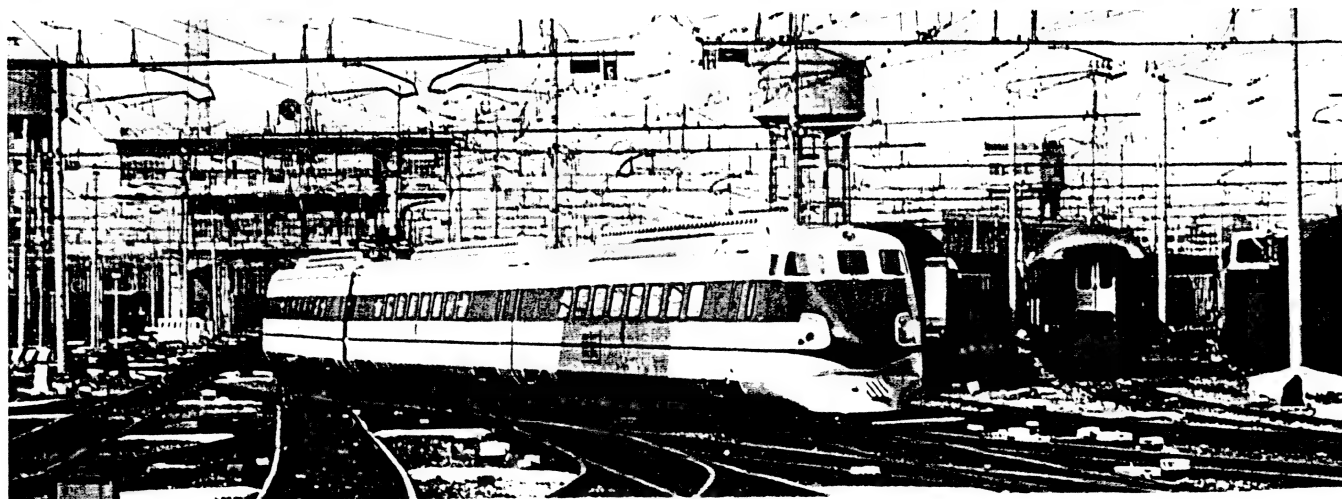
La spiegazione risiede innanzitutto nelle carenze delle nostre ferrovie negli anni '70, quando era urgente assicurare un viaggio mi-



in alto
Durante una corsa prova a Milano
Porta Garibaldi (aprile '88: foto L. negri)

in basso
Partenza da Milano Centrale dell'ETR 450
per Roma (giugno '88: foto L. Negri)

gliore all'utenza con veicoli moderni, soprattutto ai pendolari, da cui certe scelte anche a livello politico. Si pensava inoltre in una realizzazione sollecitata della Direttissima e di altre antenne a nord e a sud della stessa, che avrebbero permesso di migliorare anche le velocità commerciali. La mancata realizzazione di questo programma, l'esigenza di migliorare comunque i tempi di percorrenza, legata anche ad una maggior attenzione verso i trasporti pubblici, intorno al 1985 ha determinato le ordinazioni dell'ETR 450, l'unico treno che grazie alle proprie caratteristiche sia in grado di migliorare la velocità sulle linee tradizionali e di praticare l'alta velocità su quelle specializzate. In futuro, grazie alle nuove direttissime e all'im-



piego degli ETR 500, il Pendolino sarà utile per migliorare le velocità commerciali su altre relazioni.

Se le è permesso risponderci, ci può dire quale sia stato il momento più delicato nella realizzazione di questo progetto?

Certo, devo dire che i momenti particolarmente delicati non ve ne sono stati. Resta comunque il fatto che i tempi di consegna molto ridotti hanno richiesto un grande impegno professionale, dai progetti alle maestranze di Savigliano. A tratti siamo stati sottoposti ad un autentico tour de force e come sempre accade in questi casi vi saranno particolari da mettere a punto fino alla vigilia del servizio regolare. La scelta più sofferta è toccata alle FS riguardo al tipo di ristorazione, che originariamente faceva riferimento a quella tradizionale, tipo carrozza ristorante, rivelatasi in seguito poco pratica. Ci si è allora orientati verso una soluzione di tipo aeronautico, con pasti serviti al posto, prelevabili da una cambusa, dotata di punto di riscaldamento, presente su ogni coppia di veicoli. Di qui il ritardo nella definizione delle caratteristiche del rimorchio, che ora dovrebbe essere dotato di un bar, di un punto di vendita e di un salotto. Tra l'altro le cucinotte saranno presenti fin dalla costruzione solo su una parte degli ETR, mentre i primi saranno modificati in un secondo momento.

A Savigliano ci attende l'Ingegnere Alfredo Bacci: livornese di nascita, ha assunto la direzione dello stabilimento tre anni fa, dopo esperienze analoghe all'estero per conto del gruppo Gilardini.

Ingegnere, ci può illustrare brevemente le caratteristiche dello stabilimento che lei dirige?

Volentieri. Gli impianti occupano una superficie di 200.000 metri quadrati, metà dei quali sono coperti. Il 70% è occupato dai fabbricati dove si svolge la produzione, mentre il resto è riservato ai servizi, agli uffici, ai magazzini e al reparto esperienze, che per noi è di fondamentale importanza. Le maestranze raggiungono le 1000 unità, con 750 operai e 250 impiegati. Il fatturato previsto per il 1988 è di 250 miliardi, di questi il 4% sarà dedicato a nuovi investimenti. La produzione è organizzata su tre grandi aree: carrelli e gruppi meccanici, carpenteria - dalla preparazione dei pezzi alla formazione della cassa -, verniciatura e assemblaggio.

Ci rendiamo conto che le tre aree rivestono la stessa importanza, vi è però un settore sul quale concentrate in modo particolare la vostra attenzione?

Noi riteniamo di particolare importanza il settore carrelli e gruppi meccanici in quanto siamo convinti che il futuro della ferrovia in relazione alla pratica dell'alta velocità, sia legato sempre più al delicato connubio ruota-rotella,

che richiede soluzioni tecnologicamente avanzate e processi produttivi adeguati. Un treno di 500 tonnellate come il Pendolino, che deve viaggiare per migliaia di chilometri a 250 km/h con 7000 kw di potenza installata e 450 viaggiatori a bordo - pensiamoci bene - dal punto di vista meccanico è più sollecitato di un aereo che decolla dopo un breve rullaggio ad una velocità inferiore. Lungi da noi non solo un approssimativo ai problemi che si presentano, ma anche un'esecuzione che non sia rigorosa di qualsiasi particolare meccanico. Ecco perché il 40% dei nostri investimenti riguarda i miglioramenti da apportare all'area meccanica e un altro 35% al reparto esperienze. Ed ecco spiegato perché oggi in questo settore non si può più parlare di carpenteria, ma di meccanica di precisione. Per fare questo occorre avere dei processi di lavorazione, che non siano solo adeguati a certi parametri per una corretta esecuzione dei pezzi, ma che siano in grado di mantenere inalterate le proprie prestazioni per migliaia di esemplari. Per questo motivo le lavorazioni più delicate - come la saldatura dei telai dei carrelli - sono ora affidate ai robot. Oggi è superata l'idea secondo cui chiunque possa costruire veicoli ferroviari, purché possieda i progetti. Oggi a garanzia della qualità del prodotto, oltre ad una progettazione rigorosa è necessaria quella che noi chiamiamo la ripetitività della tecnologia di processo, che - in parole più semplici - ci dà la sicurezza che tutti i pezzi di un determinato tipo presentino una lavorazione perfetta, visto che le tolleranze ammesse sono molto ridotte.

Bene, ora può dirci brevemente chi partecipa insieme a voi alla produzione del Pendolino?

Insieme a noi della Fiat Ferroviaria, che curiamo la progettazione e la costruzione della cassa, dei carrelli, degli attuatori per l'assetto variabile e l'impiantistica di base, lavora la Marelli, che ha progettato la parte elettrica di potenza, curandone anche l'installazione su metà dei treni, mentre l'altra metà toccherà all'Ansaldo. Infine la SEPA, del gruppo Fiat, ha curato la parte elettronica di comando dell'assetto variabile. Vorrei sottolineare l'estrema complessità degli interventi richiesti dall'ETR 450, che nel contempo è una "carrozza" per alta velocità, un mezzo di trazione e un veicolo ad assetto variabile con un sofisticato software ed un hardware che deve inclinare in curva in un tempo ridottissimo 50 tonnellate.

INTERVISTA AL PERSONALE

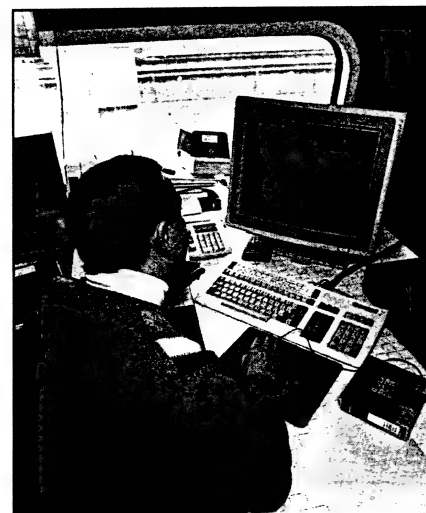
Il deposito di Torino ha fornito il personale che ha effettuato le numerose corse di prova per la messa a punto dei primi treni, mentre l'Ufficio Collaudi compartimentale era incaricato della supervisione delle stesse. Ci è parso opportuno incontrare anche i due capideposito istruttori che hanno scortato i treni: Emilio Salvadori e Angelo Laguzzi.

Quali sono stati i vostri compiti?

Siamo stati incaricati della conduzione dei treni durante la prima messa a punto con le relative "corsette" sul binario 4 della stazione di Savigliano, seguite dalle corse di prova vere e proprie, prima fino a Trofarello, poi fino ad Asti e ad Alessandria. All'atto della consegna abbiamo curato i trasferimenti presso la rimessa di Chiusi e la prima parte delle corse sulla Direttissima, consegnando poi i treni ai colleghi romani, che si vedranno assegnati gli ETR, e a quelli milanesi, presenti per fare pratica in vista dell'esercizio.

A parte la guida, suppongo che la vostra esperienza di ferrovieri si sia rivelata preziosa?

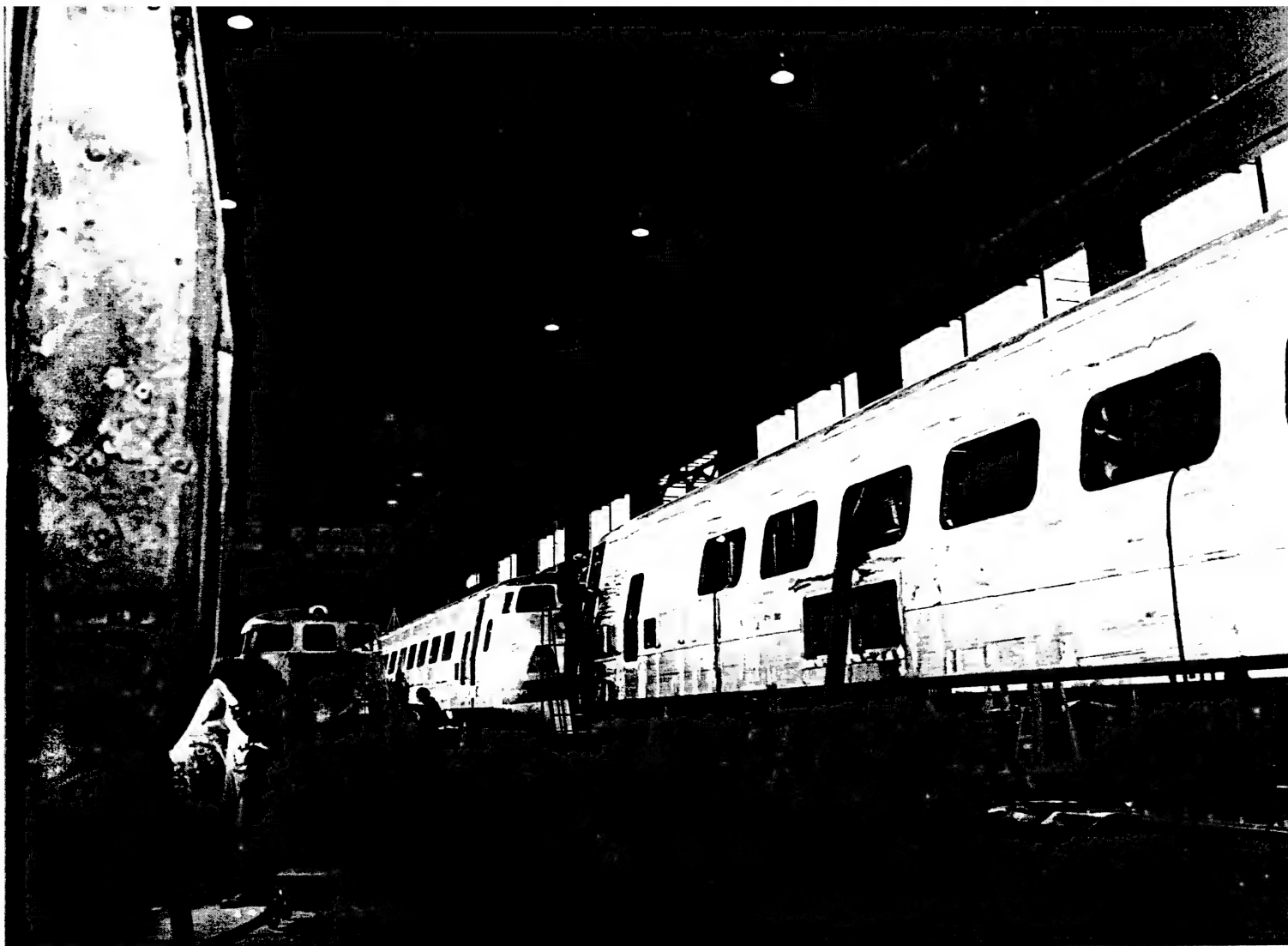
In alcune occasioni, in effetti, abbiamo avuto modo di renderci utili con qualche suggerimento per rendere certe caratteristiche più



consone all'esercizio. Salvadori ha collaborato alla stesura delle istruzioni per il personale di macchina. Continueremo poi a seguire la prima fase della messa a punto di tutti i treni.

Un impegno non indifferente, immagino!

Certo: l'istituzione di questi servizi ha richiesto non solo a noi, ma a tutti i tecnici dei vari Dipartimenti FS un notevole impegno, legato alla preparazione dei servizi ad alta velocità in generale. Pensiamo solo all'elevazione della velocità massima, prima a 200 km/h ed oggi a 250 km/h sulla Direttissima, con l'uso della ripetizione dei segnali a nove codici e all'istituzione del Rango "P" per gli ETR 450 sulle altre linee interessate ai loro servizi. Per esempio sulla Torino-Milano e su certe tratte della Roma-Napoli, autorizzate alla velocità massima di 160 km/h, dal con gli ETR 450 si potrà correre a 180 e sulla Milano-Bologna saranno au-



torizzati i 200 km/h grazie alla messa in opera del quinto codice ("verde medio") della ripetizione segnali.

Visto che avete iniziato a parlarci del servizio, potete illustrarci gli altri aspetti salienti?

Sulla Direttissima la prima bozza di orario (l'intervista è stata fatta all'inizio di maggio) prevede una velocità massima di 230 km/h, elevabili a 250 in caso di ritardo, mentre sulla Linea Lenta, nei pressi di Arezzo, vi saranno incrementi della velocità del 30%. La prima ipotesi di turno di servizio, con quattro treni assegnati a Roma S.Lorenzo, prevede che ve ne sia sempre uno presente a Milano come riserva e per istruzione del personale, che la quarta giornata sia dedicata alla manutenzione a Roma, mentre nelle altre tre sono previste percorrenze variabili da 600 a 1600 chilometri giornalieri. Da questo si intuisce che il vero impegno per noi ferrovieri inizia proprio ora.

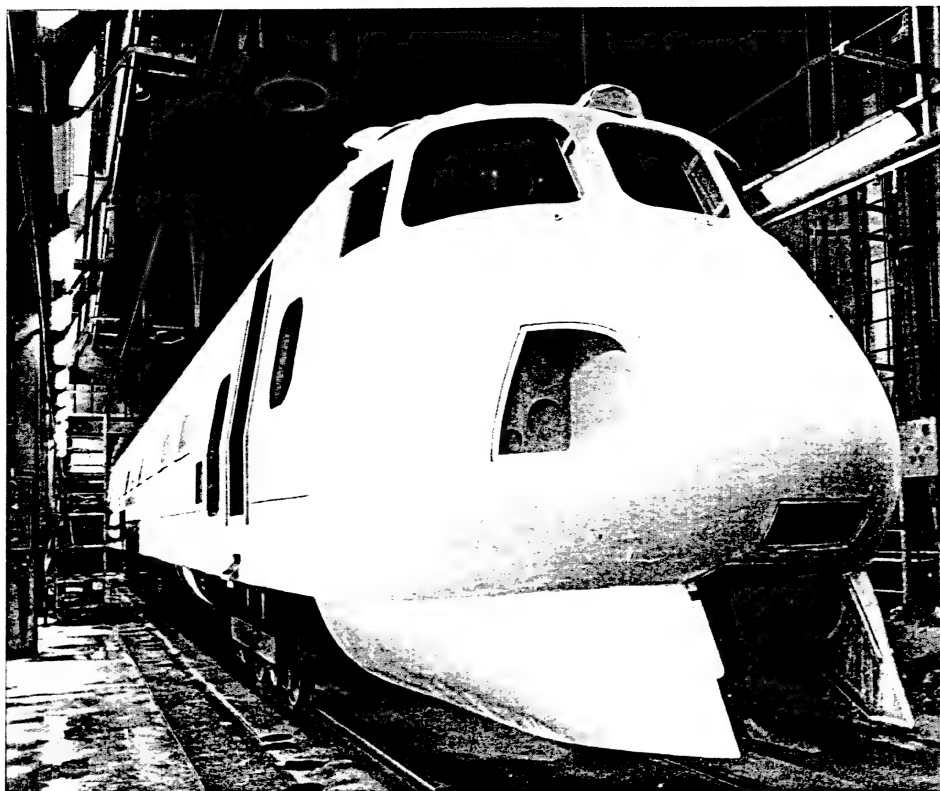
Angelo Nascimbene.

a sinistra

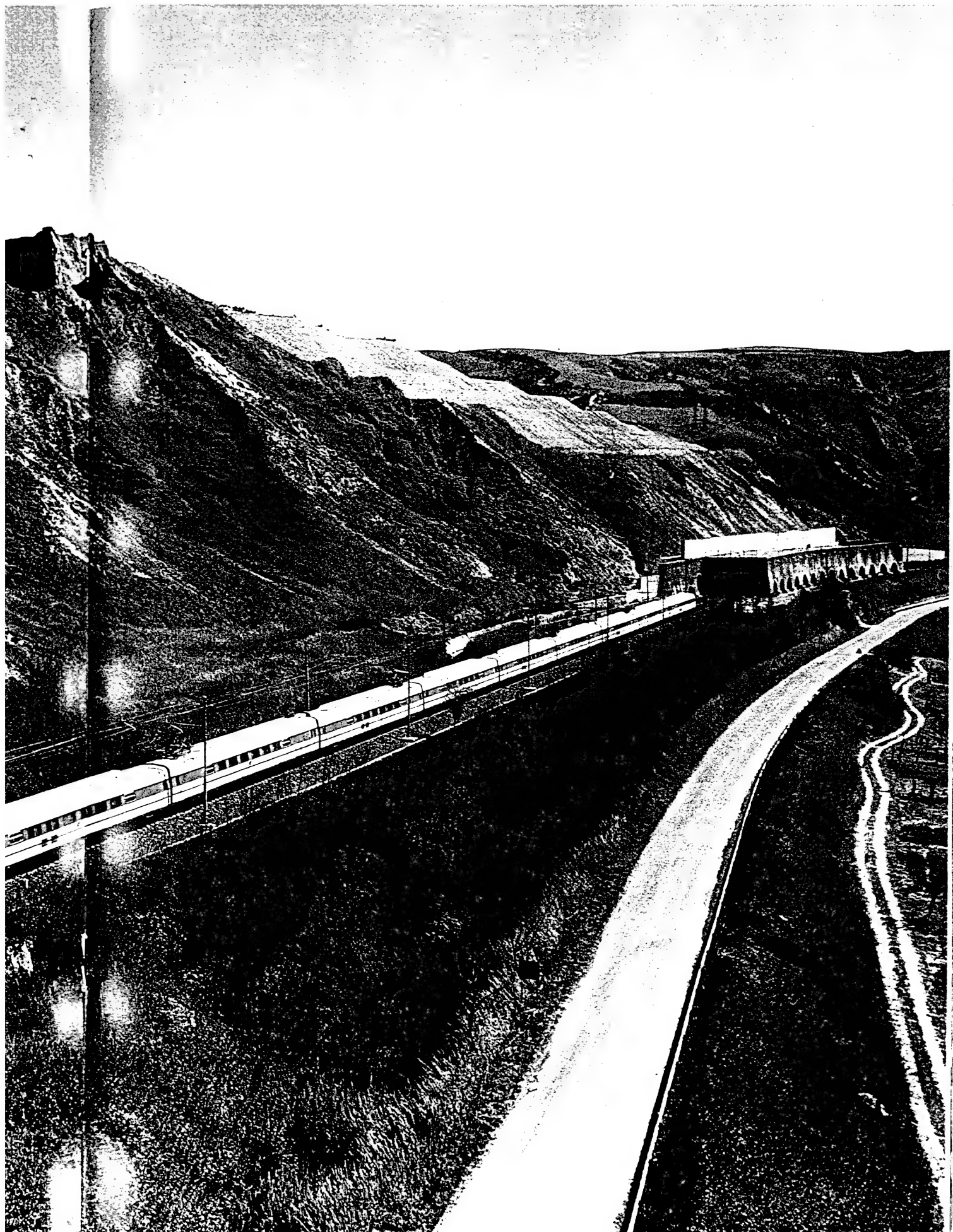
Si controllano gli ultimi dati al computer a bordo dell'ETR 450.

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*Nei capannoni della Fiat Ferroviaria si allestiscono i nuovi ETR 450.
(foto Fiat)*







il 29 maggio sono entrati in regolare servizio

ETR.450 "Pendolino": un progetto che molti ci invidiano

Domenica 29 maggio, alle prime luci dell'alba, nei depositi di Milano e Roma è iniziata la storia ufficiale dei nuovi elettrotreni ETR.450.

Intorno alle sette il via dalle rispettive stazioni centrali e la prima corsa a perdifiato lungo la dorsale della penisola: 3 ore e cinquantotto minuti, sfiorando i 150 km/h di media.

A un anno dall'uscita del prototipo, l'Ente FS ha ritenuto opportuno dare l'avvio alla prima tranche di servizi previsti per gli elettrotreni ad assetto variabile: due coppie Intercity Milano-Roma, nella prima mattina e in serata, con due appendici verso Torino e Napoli a partire dalla seconda metà di luglio, cioè da quando sono disponibili quattro treni.

Dopo l'istituzione nel 1986 delle relazioni Inter-

city a 200 km/h sulla Milano-Roma, con servizio di seconda classe, oggi si è raggiunto un nuovo traguardo, con la speranza da parte degli utenti che sia solo il primo passo verso un servizio articolato su più direttrici, affinché le opportunità offerte dall'assetto variabile siano fruibili a vasto raggio! In questo caso l'ETR.450, avrebbe anche la possibilità di qualificarsi in campo europeo come il treno di classe A, surclassando dal punto di vista delle prestazioni offerte lo stesso TGV, perché oltre alla pratica dell'alta velocità su linee specializzate, permette di innalzare la velocità massima del 20-30% anche sulle linee tradizionali, senza alcun intervento sulle infrastrutture. Nei piani del nuovo Ente FS il programma di costruzione di linee ad Alta Velocità sulla

dorsale Milano-Reggio Calabria e sulla trasversale padana si estendono oltre l'anno 2000. Nel frattempo le velocità tra 180 e 220 km/h potranno essere applicate anche alle linee attuali grazie al Pendolino e in seguito la flotta degli elettrotreni ad assetto variabile potrà essere semplicemente spostata su altre relazioni, determinando anche un buon accorciamento dei tempi di percorrenza.

L'ETR ad assetto variabile è un veicolo sofisticato, ma estremamente versatile (possiamo dire una nuova frontiera del mezzo leggero), ecco perché le ferrovie tedesche od austriache hanno chiesto di provare il treno di preserie ETR.401 all'inizio di aprile. È un'importante novità, perché questa volta si è andati oltre le semplici osservazioni da parte di tecnici stranieri in Italia e c'è da notare che l'attuale servizio potrebbe essere un importante biglietto da visita per eventuali ordinazioni.

Alcuni si chiedono se in Italia vi saranno applicazioni dell'assetto variabile su altri veicoli ferroviari, come le carrozze. Attualmente, anche se questa ipotesi è stata oggetto di studio da parte del CNR, la risposta è negativa in quanto un treno a composizione ordinaria comprenderebbe una locomotiva tradizionale, dando luogo ad una soluzione poco interessante, dato che gli incrementi della velocità possibili, in questo caso, sarebbero limitati per non rendere la locomotiva, già aggressiva nei confronti dell'armamento a causa della propria massa, soggetto di sollecitazioni troppo elevate soprattutto in curva. Non per niente due condizioni necessarie per l'elevamento della velocità massima dei treni consistono nell'alleggerimento dei veicoli e nell'adozione di carrelli con un ottimo comportamento dinamico, che implicano masse non interamente sospese molto contenute. Ecco perché i motori del Pendolino non si trovano sui carrelli, ma sospesi alla cassa. Dal Pendolino, come noto, sarà invece ripresa sugli ETR.500 la sospensione laterale attiva, che ha lo scopo di mantenere inalterate le caratteristiche di flessibilità della sospensione secondaria con alti valori di forza centrifuga non compensata.

Piuttosto, se vi sarà un'estensione dei servizi ad assetto variabile, si potrebbe prevedere la costruzione di nuovi elettrotreni, aggiornati dal punto di vista del confort e dell'estetica. Queste però sono solo supposizioni in quanto, la messa a punto definitiva degli ETR.450 avrà ancora bisogno di un certo periodo di tempo, compresa l'adozione dei treni di 10 elementi in servizio regolare. Le pagine di questo capitolo sono ancora tutte da scrivere; intanto, critiche e scetticismi a parte, con i 250 km/h, ammessi sulla Direttissima, siamo i secondi al mondo, a ridosso dei 270 km/h del TGV. Non possiamo non riconoscerlo ed allora, "buon viaggio Pendolino"!

Foto 1: all'interno degli stabilimenti FIAT di Savigliano si lavora a tutto ritmo all'allestimento dei quindici treni ETR.450 richiesti dalle FS. Particolarmente suggestiva questa inquadratura con un'impressionante groviglio di cavi in fase di posizionamento dentro la cabina di guida.

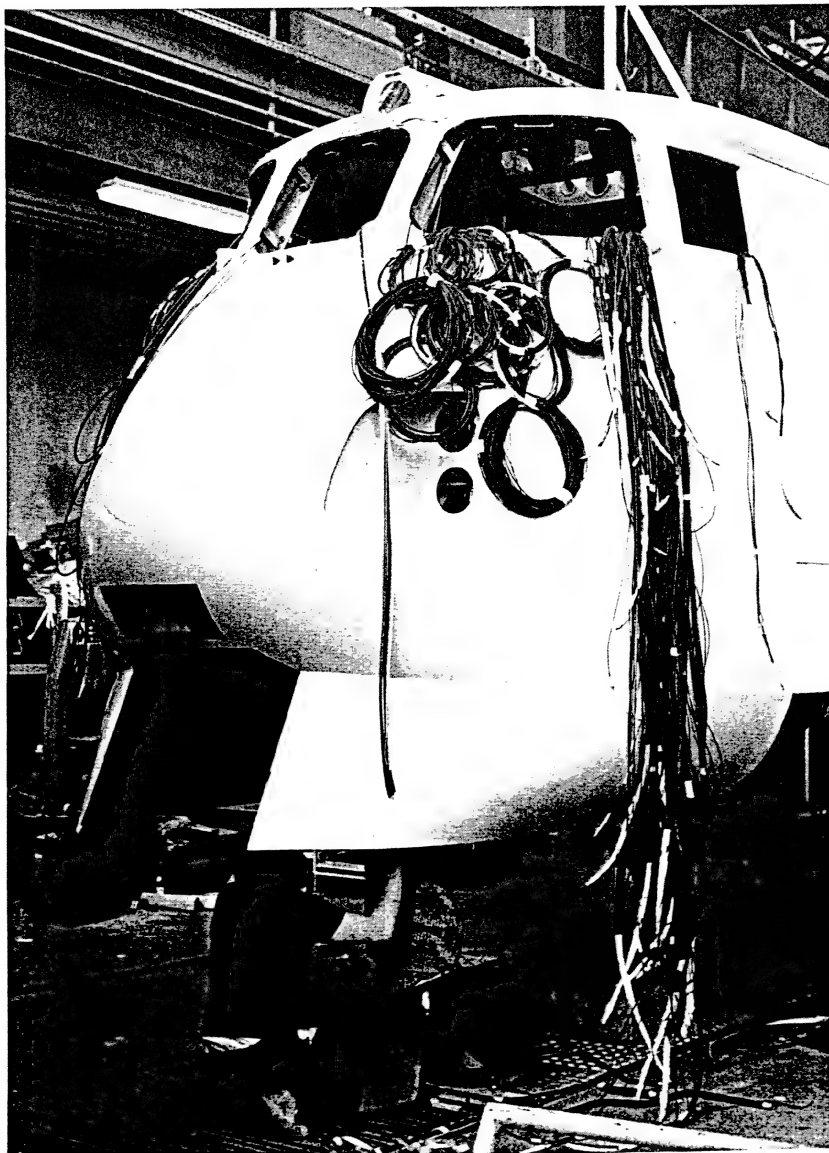


Foto 2: parti in gomma per

Foto 3 (a destra): stati, ancorati, dell'ETR.

Foto 4: il pannello per un miglio

Foto 5: i pannelli e trasversali MF a pagina

Foto 6: nel momento di inclinazione è di quelle ferrovie S

Foto 7 (sotto): lo spoiler frontale



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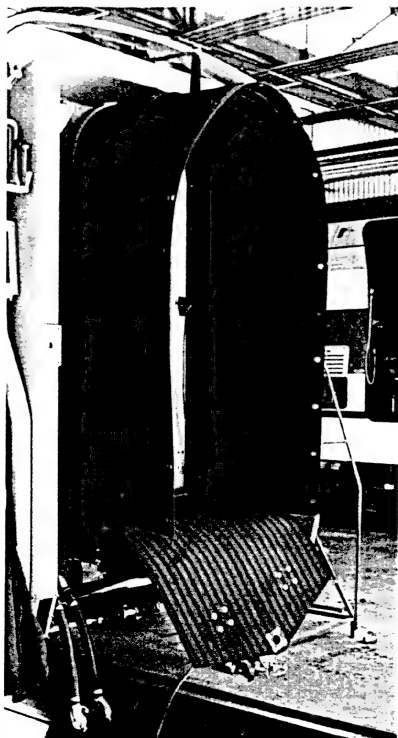


Foto 2: particolare del soffietto intercomunicante, tutto in gomma per adattarsi meglio al basculamento.

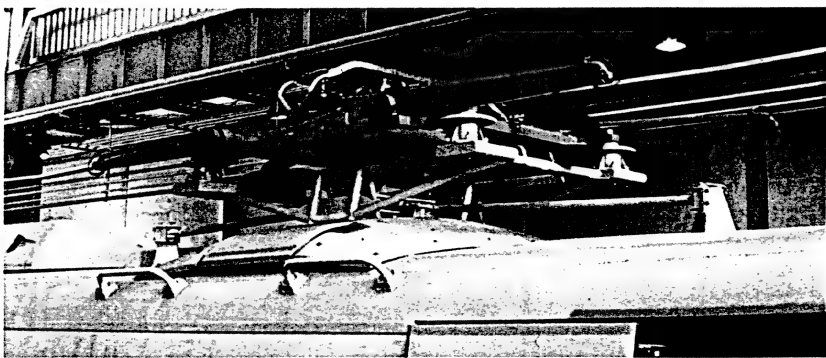
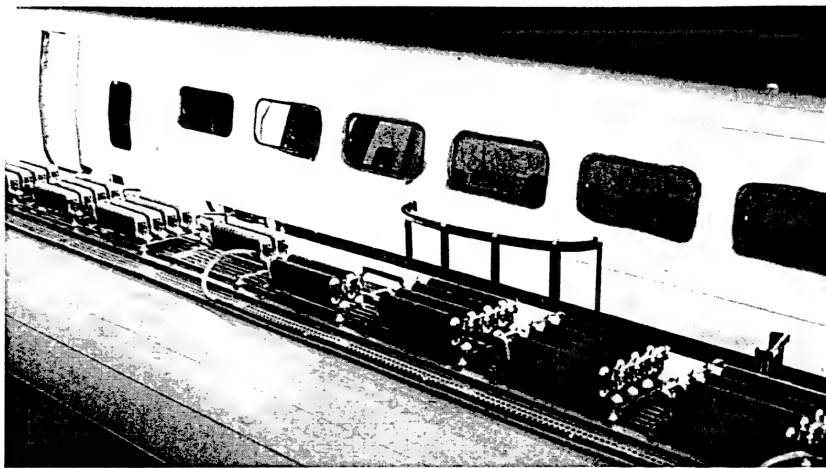


Foto 3 (a destra dall'alto al basso): particolare dei reostati, ancor privi della copertura, montati su ogni elemento dell'ETR.450.

Foto 4: il pantografo tipo 52 munito di striscianti dritti per un miglior comportamento alle alte velocità.

Foto 5: i particolari carrelli dotati di sospensioni verticali e trasversali ampiamente descritti sul numero 15 di MF a pagina 14.

Foto 6: nel reparto esperienze si effettuano le prove da fermo di inclinazione delle casse. Nell'immagine la rotazione è di 8°. Accanto è la locomotiva E.491.002 per le ferrovie Sarde. Foto: Angelo Nascimbene

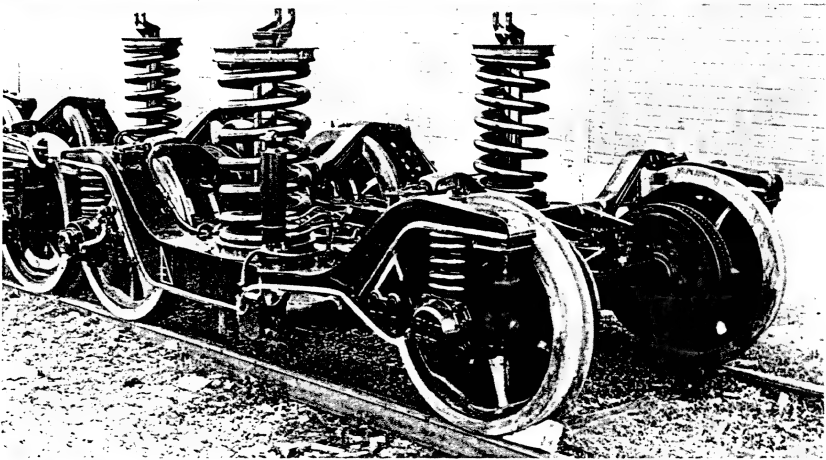
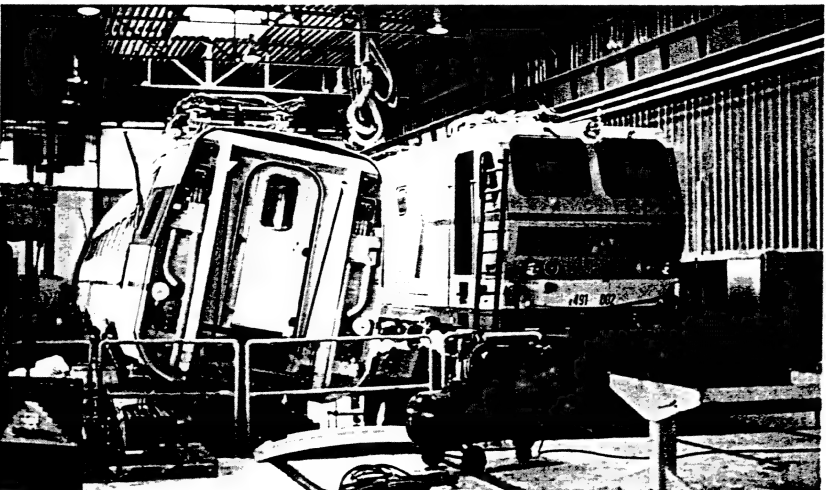
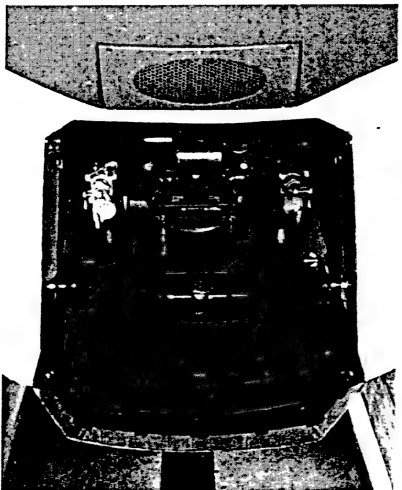


Foto 7 (sotto): gli organi di accoppiamento celati sotto lo spoiler frontale. Foto: 1/5-7: Emilio Ganzerlia



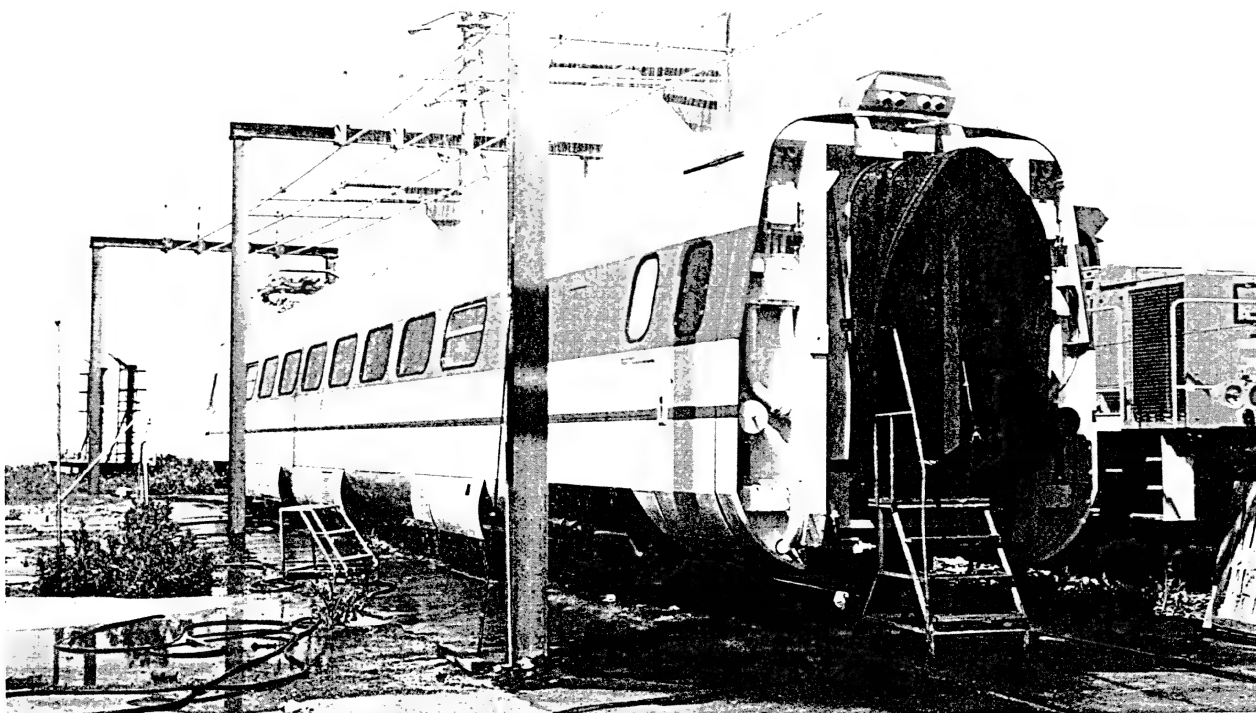


Foto 8: sotto un'artificiale pioggia battente si controlla lo stato di impermeabilità di un intero elemento.

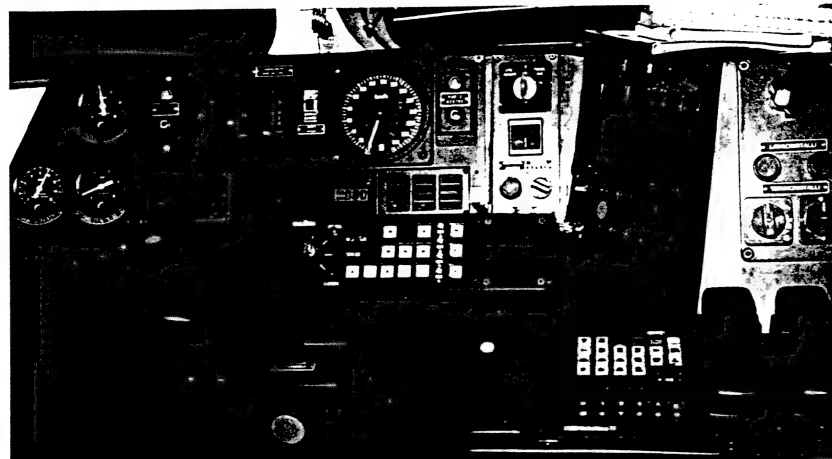
Foto: Emilio Ganzerla



Foto 9: il confortevole e rilassante ambiente interno di un ETR 450.

Foto 10: il banco di comando di un ETR 450. Sulla sinistra i manometri dell'impianto pneumatico e del freno; al centro gli strumenti di controllo del circuito di trazione; a destra gli stessi per i servizi ausiliari; al centro in basso il cruscotto per la ripetizione dei segnali a nove codici e le manopole per impostare la velocità massima e la corrente di assorbimento dei motori di trazione.

Foto 9-10: Pino Larango



Un progetto di esercizio

Creare un servizio completamente nuovo, come quello degli ETR 450, richiede una lunga preparazione da parte di tutti i Servizi dell'amministrazione ferroviaria e, come ben sa chi ha esperienza di queste cose, alcuni aspetti spesso vengono definiti nei particolari solo all'ultimo momento. La primavera del 1988 ha molto da raccontarci. Vediamo quindi che cosa è stato deciso entro la fine di aprile e qualche ipotesi sugli aspetti ancora da definire alla stessa data: "Il bello della diretta", riprendendo un linguaggio televisivo. Ecco innanzitutto la composizione dei treni, composti da sei elementi: 2 motrici di testa BAC, munite del compressore e della cabina di guida, 2 motrici BB destinate a costituire con le precedenti unità di trazione, equipaggiate con l'alternatore. Al centro vi sono poi le motrici classificate rispettivamente BAP con pantografo e BBP con pantografo e interruttore extrarapido.

Le consegne: il treno numero uno di serie da sei elementi è stato consegnato nella seconda settimana di aprile, costituito da sei motrici del treno uno da dieci elementi, consegnato il 16 febbraio e ritornato a Savigliano dopo un mese di prove a Chiusi. Il treno due è stato consegnato il 27 marzo ed è costituito da motrici nuove. Il treno tre, consegnato il 25 aprile, invece ha due BAC e una BB nuove, mentre una BAP, una BBP e l'altra BB, sono ereditate dal treno uno, dopo alcune modifiche. Il treno quattro viene consegnato nei primi giorni di giugno e dovrebbe essere pronto per l'esercizio entro la seconda metà di luglio, periodo in cui sono previste le corse Torino-Milano e Roma-Napoli, come annunciato dalla stampa. Si tratta di due servizi integrativi piuttosto particolari: infatti si è deciso che usufruiranno del nuovo rango di velocità "P" previsto per i Pendolini dalla Prefazione Generale, con velocità massima di 180 km/h e relativi incrementi di velocità, che per il momento verrebbero autorizzati grazie a prescrizioni speciali.

La velocità di impostazione dei treni, classificati come straordinari, sarebbe di 165 km/h. Sono previsti 95 minuti di percorrenza tra Roma e Na-

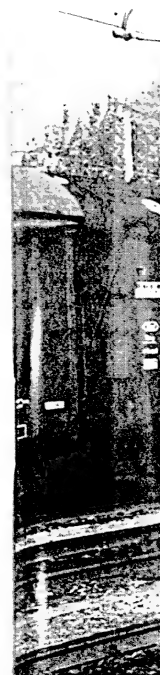


Foto 11: la trazione (due) pronta il 22 nella corsa p... gliano e Trof... ta, avendo un... di guida ed a... ta, dell'aiut... 663.1161, cre... golarissima c...

Foto 12: nel r... '87 è già pron... voglio a qua... qui ripreso a... giorno del de...

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Foto 13: nel... il primo tren... è pronto, co... delle scritte... marchio FS.

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Foto 11: la prima unità di trazione (due elementi) è pronta il 22 luglio 1987 e nella corsa prova tra Savigliano e Trofarello necessita, avendo una sola cabina di guida ed anche per scorta, dell'aiuto della ALn 663.1161, creando una singolarissima composizione.

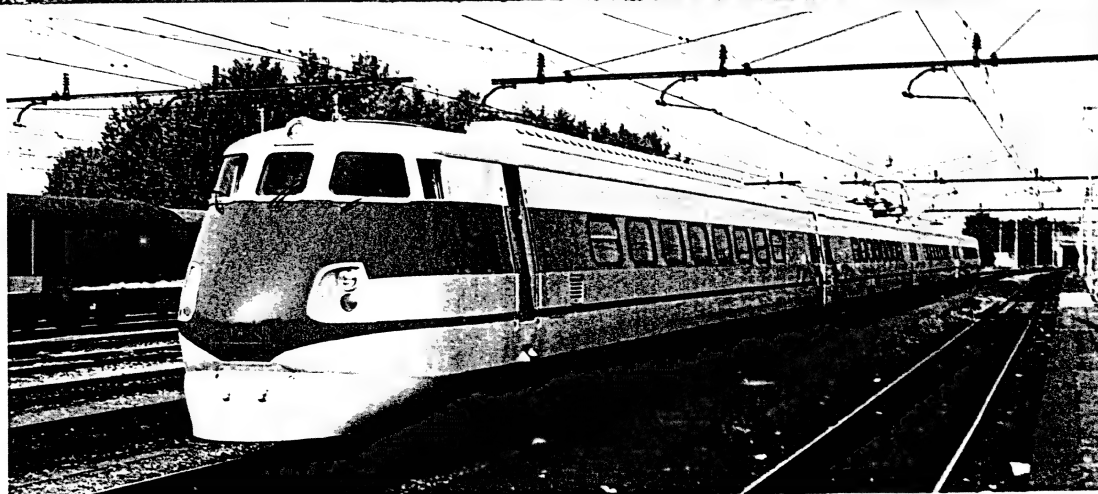
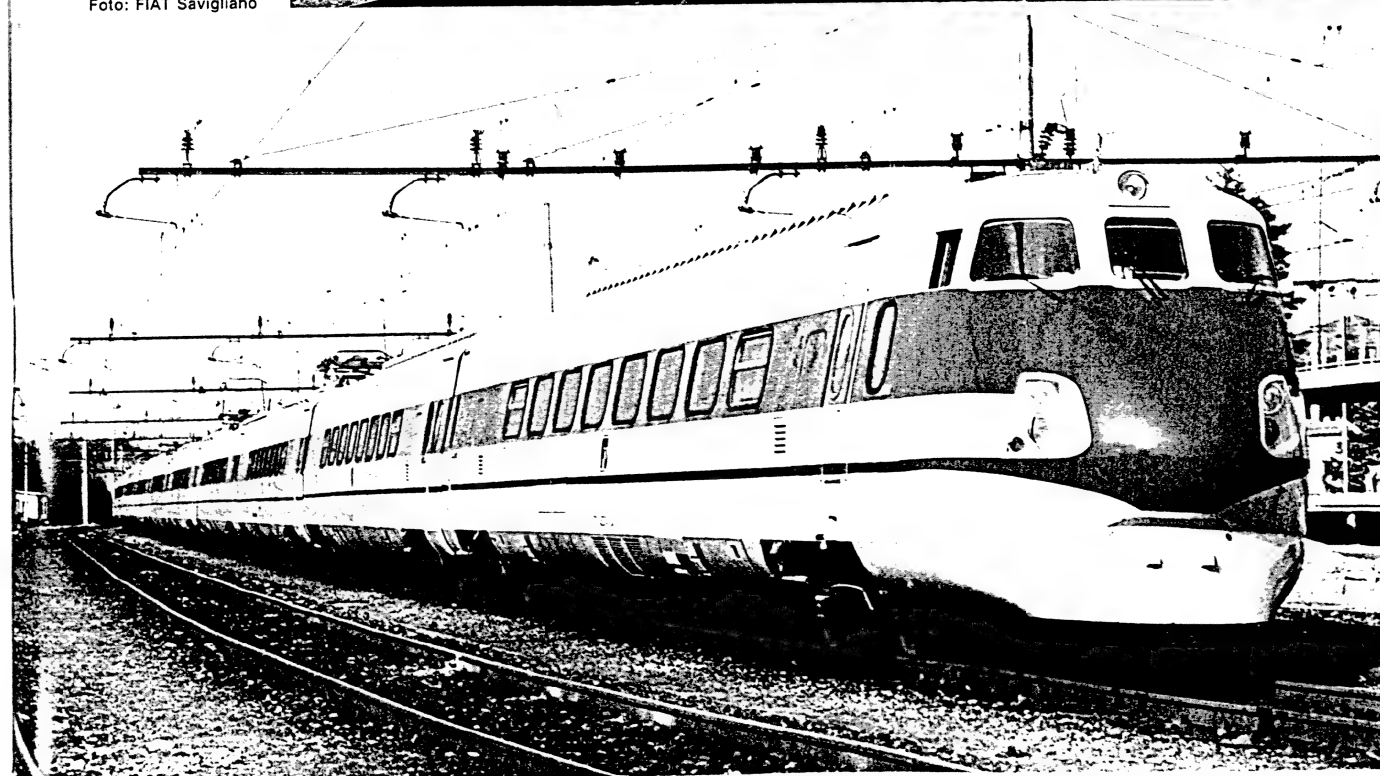


Foto 12: nel mese di agosto '87 è già pronto il primo convoglio a quattro elementi, qui ripreso a Trofarello nel giorno del debutto

Foto 11-12:
Angelo Nascimbene

Foto 13: nel gennaio 1988 il primo treno a 10 elementi è pronto, completo anche delle scritte laterali e del marchio FS.

Foto: FIAT Savigliano



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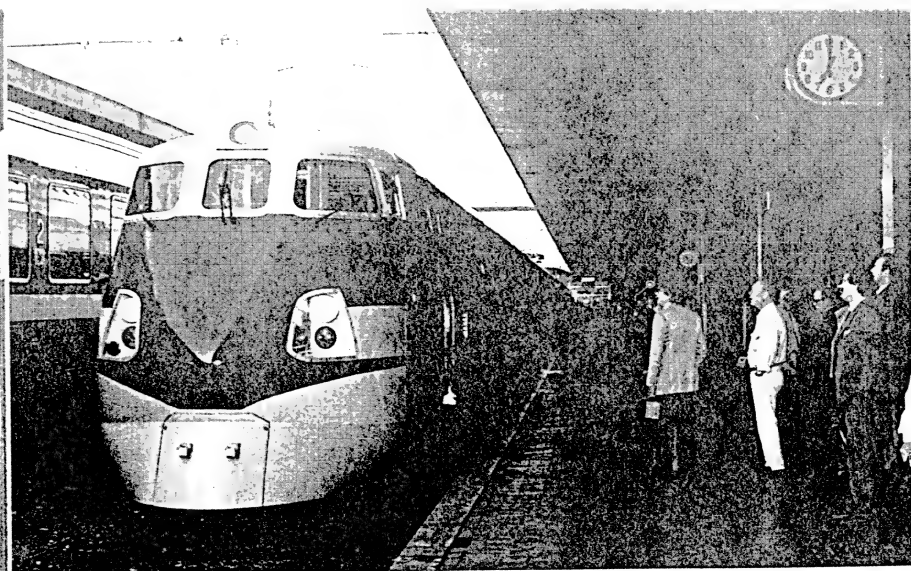


Foto 14 e 15: giornata memorabile. Il 29 maggio 1988 ha inizio ufficialmente la relazione Milano-Roma con gli ETR 450. Alle 7 in punto parte da Roma il primo ETR 450 per Milano (foto sopra: Pino Larango), da Milano parte l'IC 507 MI-RO" sempre composto da un ETR 450 a sei elementi (foto sotto: Angelo Nascimbene). Dopo 3 ore e 58 minuti "spaccati" sono arrivati entrambi a destinazione, ad una media di 150 km/h con punte massime sulla Direttissima di 250 km/h. Due foto veramente "storiche".

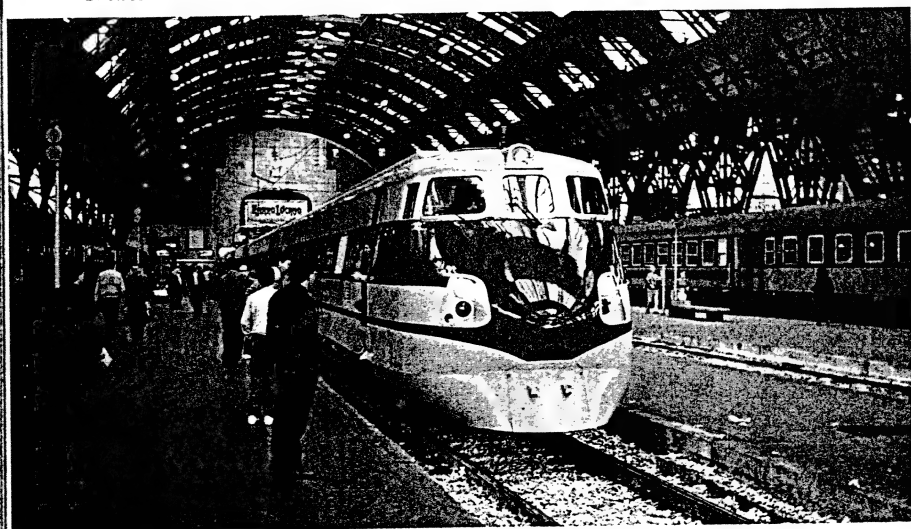


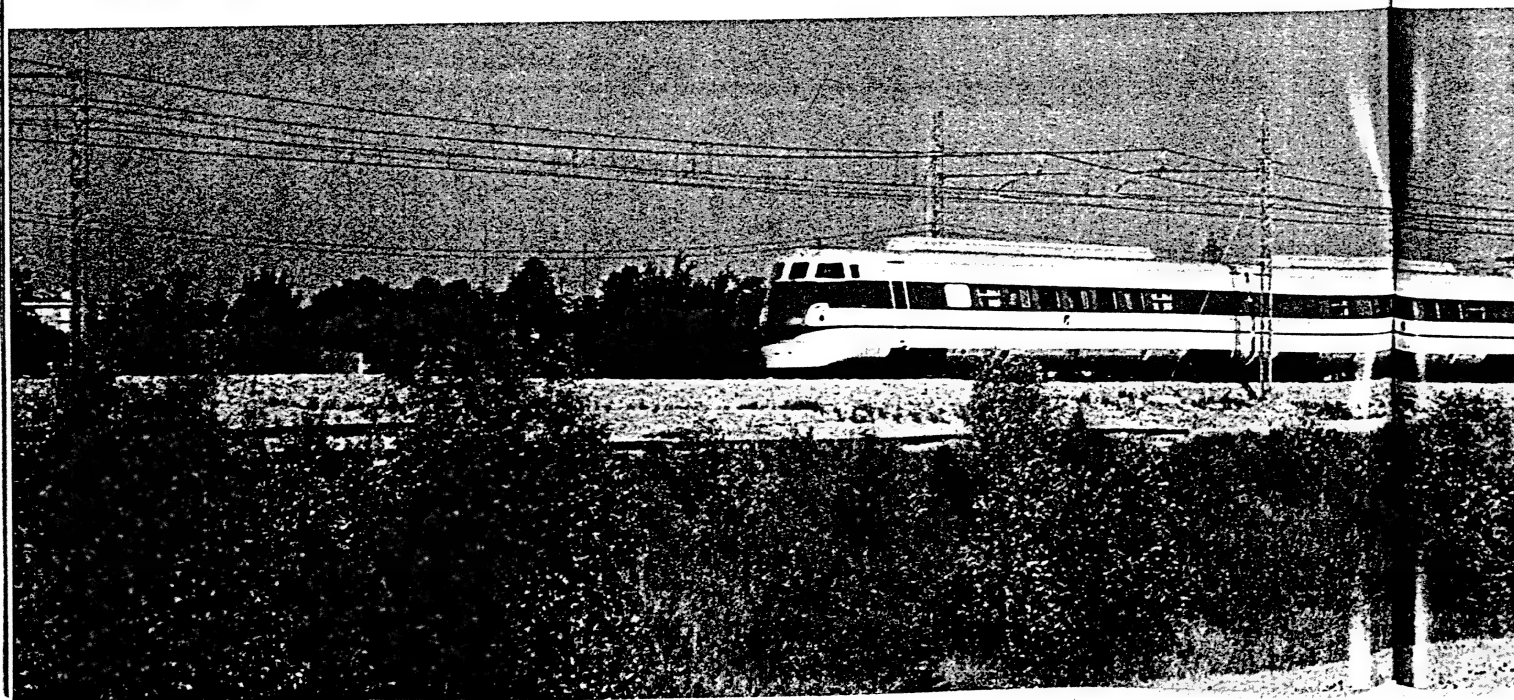
Foto 16: completiamo la serie del viaggio inaugurale degli ETR 450 di domenica 29 maggio 1988 con questa "sfrecciante" immagine dell'IC 507 Milano-Roma ripreso in piena corsa nei pressi di Modena.

poli, alla media di 135 km/h, mentre tra Milano e Torino ne sono previsti 72, a 127 di media. Sono stati studiati i seguenti orari: Roma 12.10 - Napoli 13.45; Napoli 16.20 - Roma 17.55; Milano 11.13 - Torino 12.25 e ritorno dopo 40 minuti. La conferma di questa soluzione, sebbene un po' "rischiosa" per la breve sosta a Milano, permetterebbe di coprire il tragitto Roma-Torino in cinque ore e venticinque minuti contro le sette ore impiegate via Genova.

Tra Roma e Firenze sulla Direttissima si corre a 230 km/h, con punte di 250 per il recupero di eventuali ritardi e con un incremento della velocità del 30% sulle curve della Linea Lenta. Tra Firenze e Bologna, dove è possibile, sono autorizzati i 180 km/h con 165 di impostazione. Tra Bologna e Milano sulle tratte già equipaggiate con il quinto codice della ripetizione segnali (verde medio) si può correre a 200 con 185-190 km/h di impostazione. Gli IC effettuati sono i 506 e 510 Roma-Milano in partenza rispettivamente alle 7.00 e alle 19.00 e gli IC 507.511 Milano-Roma, in partenza alle 6.55 e alle 19. I quattro treni sono assegnati a Roma San Lorenzo e la prima bozza di turno prevede che un treno sia sempre distaccato a Milano per riserva e per istruzione del personale. La prima giornata prevede un'andata Roma-Milano e dalla seconda metà di luglio la corsa su Torino. La seconda giornata è impegnata dalla corsa del mattino per Roma, dai servizi Roma-Napoli e dal ritorno a Milano, la sera e la quarta è disponibile per le eventuali riparazioni, o le revisioni. A Milano si effettuano solo la manutenzione corrente e le visite in macchina. Il personale della Trazione e del Movimento è stato addestrato per la circolazione dei nuovi treni grazie a quaranta giorni di preesercizio con due corse quotidiane a partire dal 20 aprile. Il giorno 29 dello stesso mese si è poi svolta la corsa inaugurale, alla presenza della stampa e dei principali responsabili dell'Ente FS. Partito da Roma in perfetto orario, alle 7.55 l'ETR 450 numero 2, è arrivato a Milano con tre minuti di ritardo, a causa di una sosta imprevista tra Bologna e Modena, effettuando una puntata a 262 km/h sulla Direttissima. Una bella corsa per il personale di Roma San Lorenzo, che da mesi si sta preparando a questo nuovo servizio, insieme ai colleghi milanesi. A loro i nostri auguri di "buon lavoro".

Angelo Nascimbene

Foto 17: Genova-F



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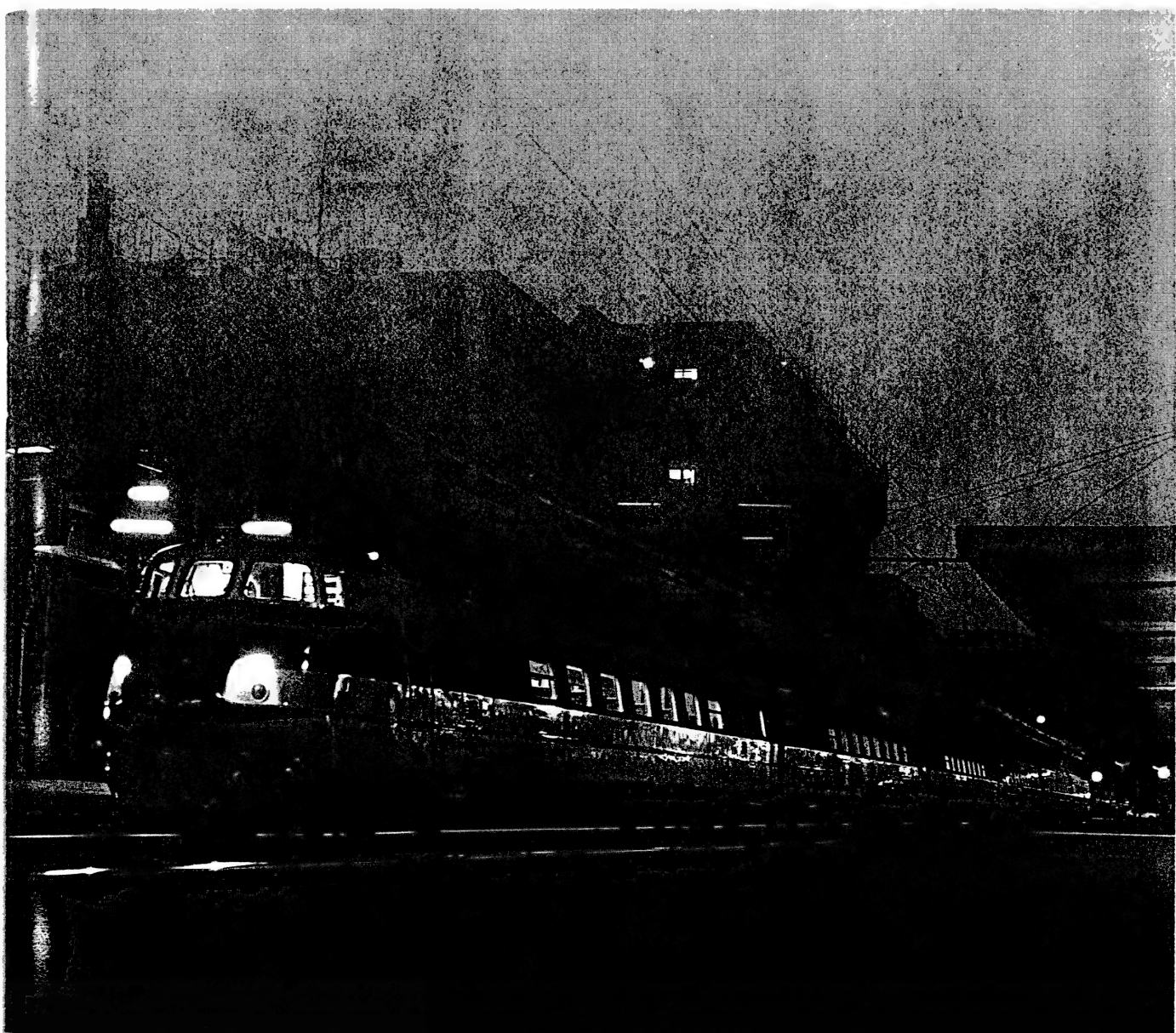
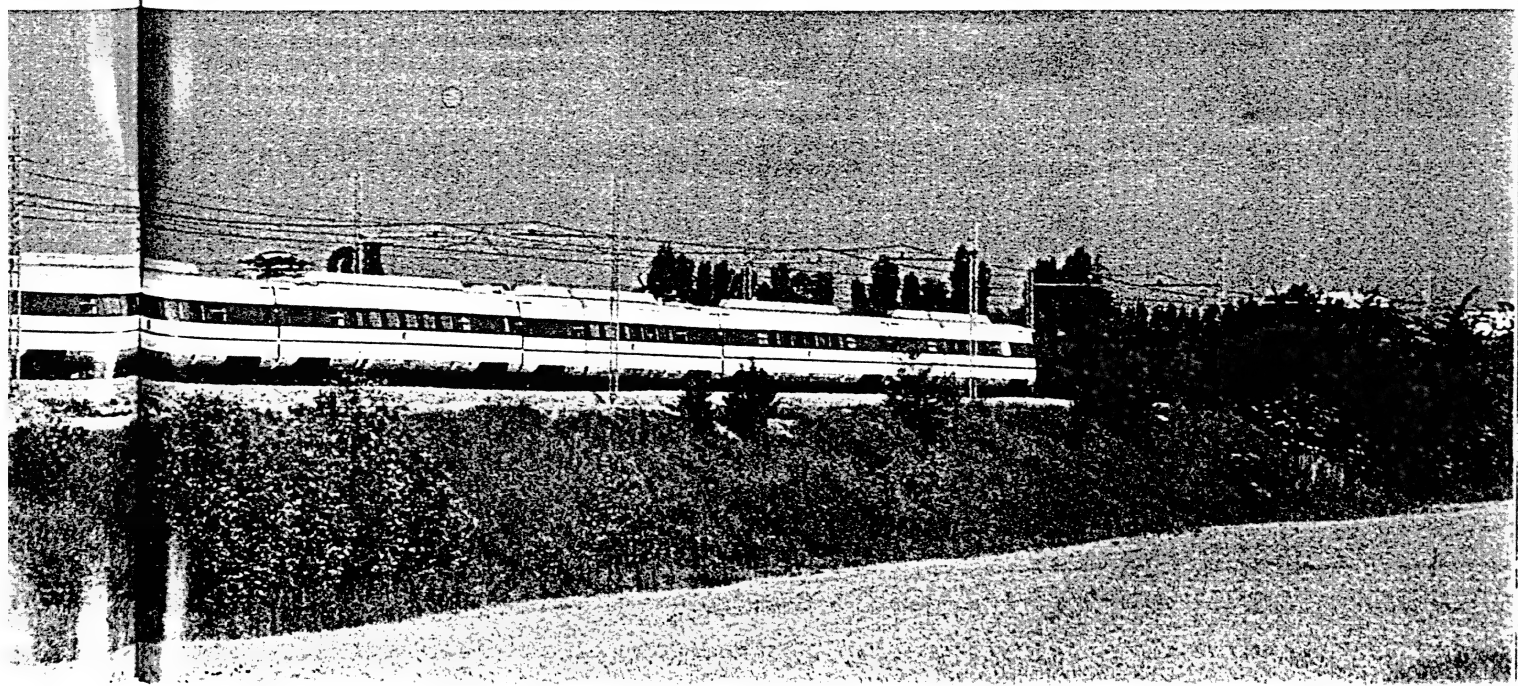
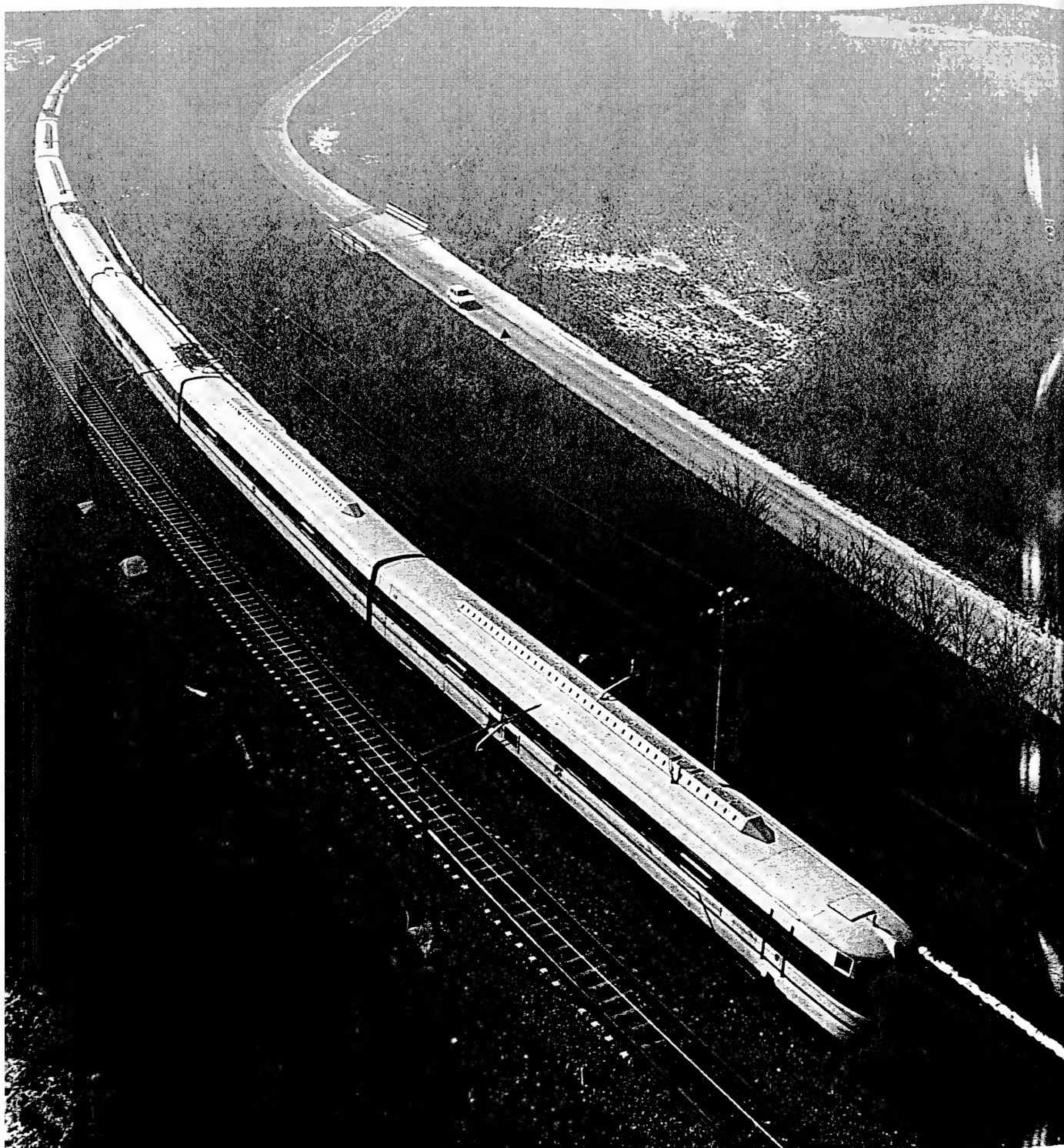


Foto 17: l'impiego dei prestigiosi ETR.450 trova un suo sviluppo anche per treni di rappresentanza, come questo "Pendolino" noleggiato dal Rotary Club per il percorso Genova-Firenze e viceversa qui ripreso al suo arrivo a Genova il 26 marzo 1988.

Foto: Paolo Gassani



VI PRESENTIAMO L'ULTIMO TRENO PER ARRIVARE PRIMA.



DAVANTI AD UNA DELLE RETI FERROVIARIE PIU' TORTUOSE E ARTICOLATE COME QUELLA ITALIANA, C'E' FINALMENTE CHI PUNTA DIRITTO AL SUCCESSO: IL NUOVO ETR 450, ELETROTRENO AD ASSETTO VARIABILE AD ALTA VELOCITA', PRODOTTO DALLA FIAT FERROVIARIA. L'ASSETTO VARIABILE, CIOE' LA POSSIBILITA' DI INCLINARE LE CASSE VERSO L'INTERNO DELLE CURVE, E' IL MEZZO CHE CONSENTE ALL'ETR 450 DI MANTENERE UNA VELOCITA' ELEVATA ANCHE IN CURVA E DI OTTENERE UN IN-

CREMENTO DELLA VELOCITA' COMMERCIALE DEL 15-25% SUGLI ATTUALI *E COMPLESSI TRACCIATI SENZA ONEROSI INTERVENTI SULLE INFRASTRUTTURE. L'ALTA VELOCITA' CHE L'ETR PUO' RAGGIUNGERE, FINO A 250 KM/H., E' INVECE PERMESSA DALL'ALLEGGERIMENTO GENERALE DEL TRENO, DALL'AUMENTO DELLE PRESTAZIONI DI ACCELERAZIONE E FRENATURA OLTRE CHE DALL'APPLICAZIONE DELLE PIU' AVANZATE TECNOLOGIE E DEL KNOW-HOW DELLA FIAT FERROVIARIA. MA VELOCITA' E

PRESTAZIONI VIAGGIANO INSIEME A COMFORT E SICUREZZA: L'ETR 450 OFFRE AI SUOI PASSEGGERI ARIA CONDIZIONATA, SEDILI RECLINABILI E RUOTANTI, ALTO ISOLAMENTO TERMICO ED ACUSTICO, SERVIZIO BAR E RISTORANTE, RIVENDITA GIORNALI E TABACCHI E POSTO TELEFONICO PUBBLICO. LA CONSEGNA DEGLI ELETROTRENI ETR 450 E' PREVISTA PER QUEST'ANNO: SARA' ALLORA POSSIBILE COPRIRE LA DISTANZA TRA MILANO E ROMA IN SOLE 3 ORE E 55 MINUTI DI VIAGGIO.

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CRUMBCRUNCHERS, INC.
Susannah West and David Powell
P.O. Box 98
Ripley, OH 45167

Late September 1988

We were glad to find #60 in our post office box the other day. We were beginning to fear that APA-TECH might have vanished altogether!

As promised, an update on our adventures in the Pacific Northwest: There are so many different environments in Oregon - the coast, the Cascades, rain forest and desert. A week is not nearly enough time to see it all! I wonder if even Oregonians are truly able to explore its diversity.

We climbed Mary's Peak, a mountain near Corvallis. From the summit, on a clear day, one can supposedly see the Cascades in one direction and the coast in the other. Though we saw neither, the vista was breath-taking. My cousin, who used to cut down Christmas trees for a living (he's now a high school science teacher, though, since he just got his degree last year, he's only been subbing) told us all about the types of evergreens that are ideal for Christmas trees.

The botanist in me was especially fascinated by the colorful expanse of alpine meadows. I plucked dozens of specimens to take home and key out, wondering as I did so how well any of them would do in Ohio. Alas, when I got back to my uncle and aunt's house, I discovered that all the field guide type books were for eastern plants. (Makes sense, since my aunt and uncle are transplanted Easterners.) With some detective work, however, we were able to identify most of the specimens.

Roses grow everywhere, in a myriad of colors - not only in people's yards, but also in the grassy verges between the sidewalks and the street. To say nothing of the lupines, which most people seem to regard as weeds. There's also a dandelion-type flower that grows taller and more gracefully than a dandelion. (I should be able to remember what this one is called, because we saw it when we were out west when I was in grade school.)

The houses, at least in the part of Corvallis we were in, were one-story

ranch-style. A lot of them had a decidedly Oriental flavor, even without Japanese landscaping. The windswept pines we saw during our visit to the coast also bespoke Japan.

We visited the coast one afternoon. Marlene is still talking about the tidal pools we examined, and the octopus that we saw at the Hatfield Marine Aquarium. We visited Yaquina Head, where the beach is covered with black basaltic rock and the harbor seals sit on the craggy rocks way out in the water. The cousins (actually my cousin's children) called this "Superball Beach" because the rocks sort of bounce when thrown. So now it is forever "Superball Beach" to Marlene. We picked up lots of the rocks and driftwood. Marlene was especially taken by the driftwood, and kept bringing me fascinating pieces she'd found.

Of course, the drought was as much a concern to the folks in Oregon as it was in Ohio. We didn't think of it that way, as the weather was pleasantly cool by our standards and every day was delightful. But it didn't rain once the entire week we were there. And all the fields we saw were being irrigated.

As much as I wanted to stay, we had to come home, bringing with us several pounds of beach rocks and driftwood. We returned to find a very lonely Dave (even though he'd said he'd enjoy a week by himself) and a sinkful of dirty dishes. We discovered that we'd missed a week of incredibly hot weather, but since that week was only the beginning of the really brutal summer, we experienced our full share of the heat.

I imagine many of you felt the earthquake on the evening of September 6, at about 10 PM our time. It was more pronounced than the one last summer. We were visiting Marlene's babysitter, and the tremor caused a few ceramic ornaments to almost fall off their shelf. It really upset Marlene, and when Dave got home, she immediately rushed to him, and said, "I don't like earthquakes to rumble our house!"

A few days later, Marlene and I looked in the card catalog in the children's library, and checked out all the books on earthquakes. There were at least a couple of them that were on her level. I even toyed with the idea of writing a

magazine article explaining earthquakes to preschoolers, but have abandoned it for right now.

One of my current passions is pysanky, also known as Ukrainian Easter eggs. I made several for Easter last spring, and this summer got asked if I'd conduct a workshop on how to make them next March, just before Easter. Anybody in the APA have experience either conducting or attending pysanky workshops? (The only one I ever went to was a very informal affair at the home of a Czech friend, which wasn't really a workshop as such.) I've never conducted a "how-to" type workshop before. My main forays into the workshop field this year have been presentations on the conservation and preservation of paper documents, photographs and quilts. Well, there's a first time for everything. If I do a good enough job, maybe other people will ask me to do it. And maybe I'll even get to the point where I can charge money!

My strong desire to decorate eggs right now is interfering with paying jobs, like designing and printing a program book for the local Women's Club. (Actually, I have restrained myself, and have only made one egg in the last month. A book on pysanky which I got from the Ukrainian Gift Shop in Minneapolis is making the temptation much harder to resist, however, especially as it is illustrated with exquisite color photographs.) The program books are finished, for the most part, though I've just found that I have to make several more copies, as the club has persuaded some new people to join.

I found an ideal use for a rubber stamp in creating these books, by the way, using a stamp of a rose to decorate the cover of the booklet - the club's flower is a rose, so I figured that was pretty appropriate. Easier than making a drawing my own self and photocopying it, which is what I did two years ago.

Dave's MBA class lost two or three members over the summer, but the ones who are left are still going strong. According to Dave, they all hate statistics. He, on the contrary, thinks it's easy, though he feels the textbook's lousy. He tried to tell the instructor that he should change the text. He didn't get very far, since the instructor is also the textbook's author. Dave favors one

called *Statistics for Math Haters*. (This was the text I used in my stats course at Ohio State. I was dead set against stats from the beginning, and only took it because the course was a degree requirement. I actually signed up for and dropped it twice before finally gritting my teeth and deciding to go through with it! *Statistics for Math Haters*, however, did a lot to dispel my fears.)

Dave had some truly fascinating experiences during a weekend outdoor education session called "Venture Out" which was held at an environmental education camp near Cincinnati called Camp Joy. This was part of his MBA coursework. (He had to write a paper on his experiences afterward - a paper that wasn't graded and wouldn't have any effect on course grade, unless, of course, it wasn't turned in.) I'll let Dave tell you about that as I wasn't there, but the gist of the weekend was to teach a person to be assertive, learn to face inner fears, and discover what it really means to work with a team.

I have had experiences similar to some of the exercises as an outdoor education camp counselor, and in an outdoor education teacher workshop. One is what I call the blind walk, though these folks called it a trust walk, when one person is blind-folded, and his partner leads him around. The other is when you jump out of a tree and trust the people on the ground below to catch you. Dave's experience was somewhat different. At Camp Joy, they jumped off a forty-foot pole.

Ripley has a new museum - the Ohio Tobacco Museum! There is some resentment statewide that the state of Ohio allocated \$50,000 in its budget to start this museum - surely the money could be put to better use, people reasoned. Certainly tobacco's days are waning, and certainly a museum devoted to it is unnecessary, they felt! As I see it, tobacco's role in U.S. history is important, and as a history museum it is valuable. I don't know, however, what its future is - the \$50,000 went entirely to purchase the 1850s house, additional money from R.J. Reynolds to remodeling the building and designing and installing exhibits. Two museum consultants who were formerly with R.J. Reynolds designed the exhibits. We visited the museum during this year's Tobacco Festival, and I was impressed by

the exhibits - very professional.

But I wonder about the future of the museum, with no curator, now that the consultants have finished the work. The Board of Directors has of course invited people to become supporting members of the museum, but their campaign has hardly been what you could call aggressive. The poor Rankin House (an orphan child of the Ohio Historical Society) hasn't had any new exhibits installed in 40 years; will the Tobacco Museum suffer a similar fate?

Once again, summer is over. As Marlene said as she watched leaves in our backyard tumbling from the trees, "It's getting to be fall, isn't it?" Monarch butterflies, with their slow undulating flight, drift by, looking almost like dead, brown leaves at first glance. Now that the weather has finally become bearable, after being stifling for so long, it's like trying to grab three months of summer, in only a few weeks. For so long, being outside was unbearable - now I long to spend all my time outside tramping in the woods, savoring the late summer.

Beware of seductive TV advertising, especially if you have a sharp-eyed preschooler in residence! Cröonchy Stars, Crispy Critters, Dunkin' Donuts cereal and Pop Tarts all are in our cupboards now. Actually, I approved the Pop Tarts, because she was curious to see what they were like, so I said we could get some. She isn't too impressed, and I certainly am not. They seem so anemic compared to what I remember (or think I remember) they were like when I was a kid. All the sugary cereals, however, were instigated by Dave. (His favorite cereal is Cap'n Crunch, so you can see why!) One thing I can say, though - once you buy these products advertised on TV, and find out how insipid they are, you're never going to watch another ad thinking about how yummy that food is!

Well, I see that the "rainbow rocket sticky thingies" have been appropriated by Marlene, so I must hurry to protect the ones she hasn't stuck all over the walls, refrigerator, stove, etc.! One of them, I see, has adorned her plastic fireman's hat. Firemen are her "thing" right now, ever since the firemen's parade during the Tobacco Festival. (This is a rather interesting event, by the

way. Members of volunteer fire departments from Brown, Adams and Clermont Counties in Ohio and Mason County in Kentucky all bring their equipment for this parade. Dozens of firetrucks, watertrucks, fireboats and emergency vehicles, both contemporary and antique, all parade very slowly down U.S. 52, from downtown Ripley to the tobacco warehouses. They blow their horns and sound their sirens the entire time, so you can imagine that the din is terrific.

And now, on to the mailing comments!

MAILING COMMENTS

Valli: You talked some time ago about books concerning growing up Catholic. Have you (or anyone else for that matter!) ever run across a British sitcom called "Bless Me, Father"? Set in the early 1950s, it's about a young curate working for a seventy-ish, very crotchety Irish-Catholic priest (based on an autobiographical book which I think goes by the same title). We missed some of the beginning episodes, so are filling in information in patches, plus because it's on at 11 PM Sunday evening, I frequently miss seeing it. (The same goes for "Eastenders", another pithy British show I enjoy - it's even worse, since it's on at 11:30 PM on weeknights!)

Valli and Joa: Continue to regale us all with your adventures. You make us feel very provincial - actually everybody in this APA does! - but we certainly enjoy experiencing others' adventures vicariously. (With the exception of our trip to Oregon, we generally range no further afield than Columbus, Ohio, although we did visit Washington, D.C. and Oak Ridge, Tennessee earlier this summer. Marlene and I had the chance to visit the Museum of Science and Energy while at Oak Ridge, but it was only an overnight trip.)

Though this sounds as if we lead a very boring existence, I'm far too busy to be bored! I've also observed, however, that this is a pattern that young marrieds with children fall into. The travelling I did as a youngster was mainly due to the fact that my father was a high school teacher, and hence had the summers off. If he'd been, say, an engineer like Dave, I probably would have had

far less opportunity to see so much of the U.S. Sigh.

Greg: Good luck to you in your new career as a student! (I wouldn't mind going back to school now myself - Dave has been making me severely jealous, especially as he's been enjoying school so immensely.)

Dave's working full-time while he's going to school; of course, this means that we sacrifice two Saturdays a month since he's in classes from 9-5 on those days (the other two weeks of the month he has classes on Fridays). It's quite intensive, and I don't know if I would be able to juggle things as well as he does, in his shoes!

Other appealing points to the program: it's only a year and a half long, and there are no preliminary courses required that one has to take before starting the actual MBA program. (Some of his colleagues are in night school MBA programs that will probably take them about five years to finish, first because they have preliminary courses to get out of the way, and secondly because they can only manage, timewise, to take one course a quarter, or semester, as the case may be.) Also, a not-so-hot undergraduate cum won't keep a person out if he/she is sincere and does well enough on the GMAT. Of course one also has to get approval from supervisors and other higher-ups. I guess Dave encountered some resistance and skepticism. He had to go all the way to the vice president of Dayton Power and Light Co. to get his application approved.

It's not all roses, of course - although it's really a good program, as far as I can see, it's expensive. There are apparently some members of the class whose companies are not reimbursing them, and who are paying their own ways - that, in my opinion, takes a lot of dedication!

Well, I don't think that you or anybody else expected a dissertation about Dave's school, so I'll stop while I'm ahead.

More on school in general, though. Actually, I think I worked harder when I was in school than I did when I was out in the "working world." Not only with my academic work, but also with the various part-time jobs (all subsidized by the

university, too). I certainly could have gotten into being a professional student, however! After five quarters, though, my committee members started to hint strongly that it was getting near time that I got my thesis written and finished up my degree.

My stamp collection is very eclectic, as I'm always discovering new stamps that I feel I *must* have. (Of course, since many are impulse purchases, sooner or later I find that I don't need them at all!)

My tastes run toward what are called "Fantasy" stamps in the Personal Stamp Exchange catalog, though there are some peculiar things included in this category (dinosaurs, for example). Being lazy, of course, I also tend toward the stamps that say things like "You are Invited To." These come in handy when I'm asked to send out fifty invitations to a potluck or something like that.

Actually, I've not gotten really fanatical about collecting rubber stamps. I like to make my own stamps best, using white plastic erasers and either an Exacto knife or Speedball linoleum block cutting tools. I've made some very satisfying stamps, but their main problem is that after four or five years, they start to fall apart.

The "boughten" stamps, besides being much more durable, are also much more intricate - part of their fascination, of course. I find that they must have some practical use, however - they must be able to be used as, for example, a label for canned or baked goods, bookplates, or cards.

Well, I know that you weren't wanting or expecting a dissertation on rubber stamps, either, so I'd better stop right here!

This is probably the longest mailing comment I ever wrote to anybody! I think I've replaced my book-buying vice with another - music. True, it's not as expensive as books, but some months almost all my organ-playing "salary" goes to music. I let my subscription to one music magazine expire, but I picked up another magazine to take its place! Fortunately, stores where you can buy collections of keyboard music are rarer than bookstores, so I order most of my music through the mail, and so far have been able to keep my mania fairly well in check!

Be well and happy!

Supernak

Living in a Trojan Condominium

Audrey & B. Gabriel Helou
2691 Roundtree Drive
Troy, MI 48084
(313) 524-3298

Summer is a time for taking life easy. It is a time of warm evenings, vacations, trips to the beach and parties that last long into the night. It is a time of iced tea, hammocks and sleeping in late. Most importantly, summer is a time of garage sales. A simple trip to the store for milk can take you past half a dozen of these bargain emporiums. This is one such trip. We might have gone out for milk or bread or any number of things.

We crane our necks to see what is on display in the driveway. If the clutter extends over onto the yard, so much the better. It is the garage that is the real hook. The garage is never well lit. The possessions that are scattered around on the driveway and the lawn are displayed in a subtle pattern that forces your attention to be drawn to the garage. And you can't see inside it. So the car slows to a crawl.

"Do you see any thing we could use?"

"I'm not sure," Audrey replies, "I can't see what's in the garage."

The garage is calling to us. Ulysses' crew had their ears plugged with wax and he was lashed to a mast when his ship approached the Sirens. Driving by a garage sale we lack that advantage; we can't close our eyes and surrender control of the car.

"Should we stop and take a closer look?"
The question is not necessary.

"Yeah, what the heck." Neither is the answer.

The larger items are scattered on the drive and the lawn. The dimly lit garage usually contains the real treasures, laid out on card tables and a picnic table. One time I spotted a 102 year old sporan and had to have it. Sometimes there might be an eye-catching piece of jewelry or a tote bag. Kitchen supplies are almost always found. Many times you leave empty handed.

"Look at this," I say, "a mixer. A Hamilton Beach."

"But you bought one a few weeks ago. What happened to it?" she responds.

"Oh, it's in the basement. I'm still cleaning it up. But it didn't have a bowl and this one does. It's only \$5. The bowl alone would cost more than that."

"Hmmm."

"It'll also give us spare parts for the other one."

"Well, okay."

Most purchases get decided this way. We never know what we are looking for when we go to a garage sale. The sensible approach would be to make a list of things we need around the house and restrict our purchases to the list. But there is a good chance we would forget to add something to the list. We would get to a garage sale and discover nothing they are selling is on the list. Just then, we would find a widgeit and remember that we needed a new widgeit for the desk. That is why we are now standing

at a garage sale without a list. If the list does not cover all situations, it is not worth the trouble. Besides, you never know when a garage sale will pull you in and the list will be at home. So here we are debating whether we need to get another chair for the living room.

"Hmmm."

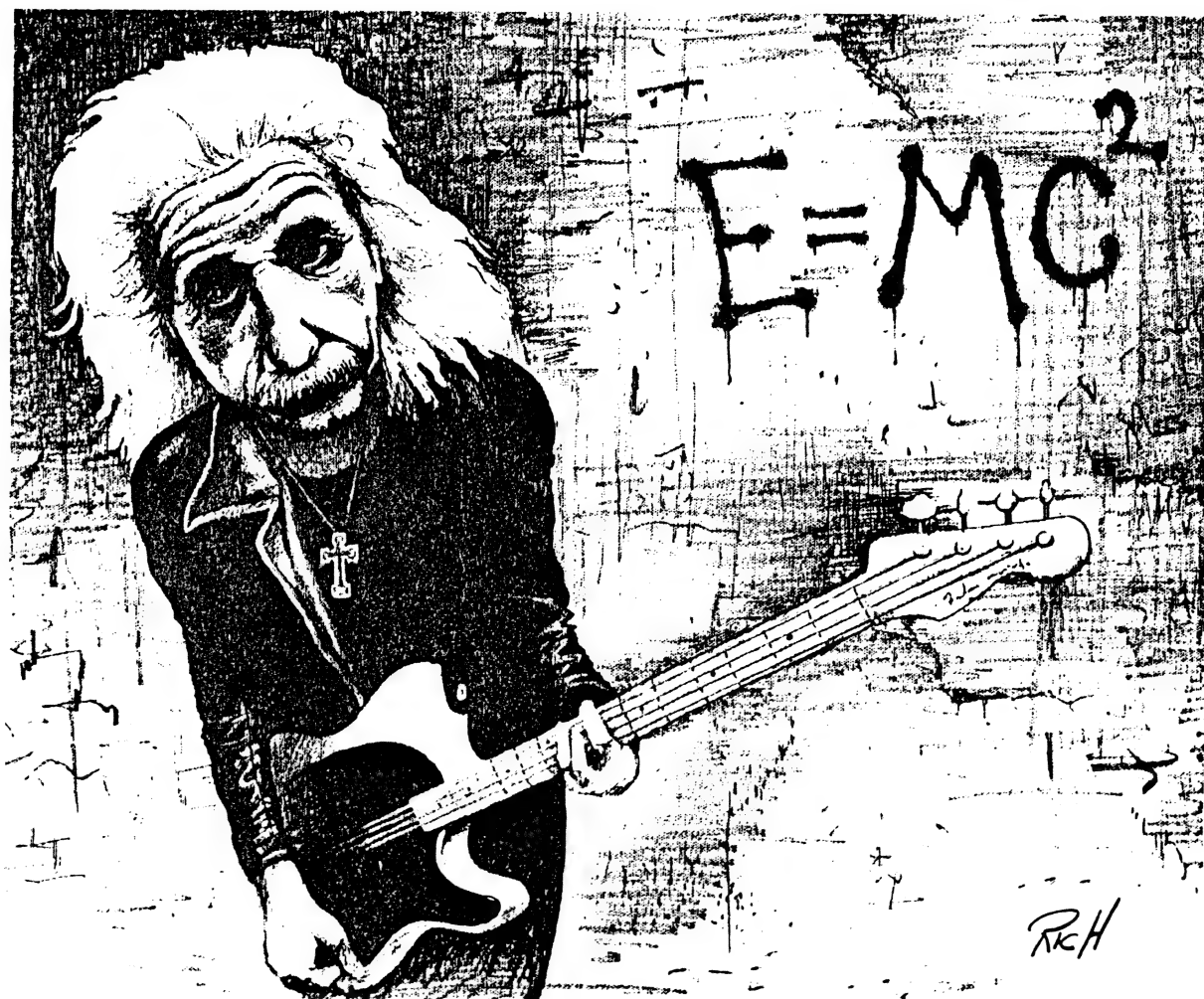
"It'll also give us a second chair that we both find comfortable."

"Well, okay."

It really is a comfortable chair and we do need another for the living room. And it fits

in the back of our car. Call it Fate. We continue on our way, pick up the milk (or bread, maybe) and head home. The mixer goes to the basement to join two other mixers, a blender and a couple of fondue pots. The new chair fits nicely in the corner by the windows and I decide to test it immediately. Zelazny's latest offering is near at hand.

I pick it up and begin reading. I read late into the night. It is time to climb out of the chair and into bed. Tomorrow is Sunday, so I'll sleep in late. Summer is a time for taking life easy.



Physical Graffiti

Out of courtesy to the artist, we'd like to mention that prints of this pen and ink drawing by Richard Jackson may be ordered through Slammer Graphics, P.O. Box 346, Rochester, MI 48308-0346. (Prints measure 20 x 24 and cost \$15.00)

Life in Audrey's World

No, the only thing I think about isn't rampant consumerism. I also read. And I have been reading a great deal since I postponed working towards my Master's Degree.

When I was very little, my father would sit down with me when he got home from work, and get out the S&H Green Stamps catalog. He would point to a picture and identify for me. I quickly learned to do the same, and before long, he could point to a picture and I could identify the object. Within a few months he ran out of catalogs -- which made me cry. (He was quite puzzled when none of his other children had any interest in this game.)

I attribute my interest in reading to this early exposure the concept that pictures and written words reflect real world events and objects. From what I saw, I gather that my brothers and sisters had a real tough time with that idea.

By first grade I was reading twice as fast as my classmates. Which caused me no end of trouble when it was my turn to read aloud. I never knew where the kid before me had left off, only that it was pages behind where I was. Not only was it embarrassing having "lost my place," but I didn't want to read out loud -- I wanted to find out how the story ends not go back to(wards) the beginning and read to a bunch of slow-pokes!

I endured first to fifth grades at a parochial school. I hated the playground (an empty parking lot), my grades were pretty bad, and religion class was the absolute worst, but I loved the school's library. The "little kid's" library was in one room, and older kid's was in the room across the hall. St. Joan of Arc's school held classes for grades 1

through 8. The older student's library was for grades five through eight, but I had already read all the books of interest by third grade. So there was nothing left for me to do whine, beg and plead until I gained permission to use the library across the hall. By the time we moved, two years later, I had read out that library too.

During sixth grade I read the complete contents of our in-room library and the contents of the main school library with the except of the "little kid books." I can still recall the joy I felt during "rain days," when we would be sent to the library instead of outside for recess.

In Junior High I read every mystery novel; every Science Fiction work on display; everything on the Secret Service, FBI and CIA, as well as the FDA investigation squads, the K-9 Corps and the police; every book on World War II; all the books concerning travel and life abroad; cartoonists and art; fashion; all the texts on Indians (American Indians) and tribal customs; and biography or autobiography that concerned any of the above mentioned topics, and anything else that looked like it might be interesting. By 9th grade I was reading a minimum of four books a day. I had worked in the library for two years, and I had meanwhile read all the books on those topics in the public library as well. Plus all the magazines the library received while I was working there.

During high school I repeated this pattern, except that I worked there for three years, and I was eventually permitted to work in the back room among the forbidden books -- books that had been donated to the library but were deemed to be inappropriate reading material for young minds. Books like The Peter Pan Bag and Tom Wolfe's Electric

Acid Test could be found back there, along with three shelves of Harlequin Romances. Well, I read all of those too, except the Harlequins. Oh, I tried to read them, but they were just too awful, being composed of wretched plots and insipid writing...Yech!

After all those books, it's amazing I don't know more than I do. My mastery of reading seems to have been outpaced by only my ability to forget. The one thing I truly regret is that I didn't keep a reading list. Particularly since I have never been any good at remembering author's names (or book titles for that matter). Which explains why I don't remember the name of the first Science Fiction story I read. I clearly remember being in Junior High, reading my way through the stacks. And I remember three particular books, by three different authors. If anyone has any guesses as to the author and/or title, I'm all ears.

One was a trilogy (or I think I have a hazy memory of it being a trilogy) which concerned a young man who was captured from a starship after his parents were killed by slavers. Somewhere along the line he was bought by a beggar, who taught him how to beg, steal, and most importantly, think and read. After a time, he was given his freedom (which he didn't want) and was forced to flee the area. A number of things happen, and a few hundred pages later he becomes an officer aboard a starship and has trouble relating to the people aboard who refuse to believe that slavery exists elsewhere in that galaxy. He starts learning more about his family (which, as I recall, were rich, powerful, and betrayed to the slavers) and the political goings-on in the area. I don't remember the ending at all. I have been looking for this story for years, and I don't recognize the name from those on the stacks at the library or the bookstore, and I really have no idea who the author

may have been. If anybody recognizes the plot, please let me know.

The second book has faded into my memory so completely that I can't describe the plot. The first clue is that this book featured sliderules as an advanced way of doing math and figuring spaceship flight. Machines that can do mathematics (or logical thought) are not even hinted at. Second clue: on IRS forms the boy's father describes his occupation as "spy," (which irritates both the boy and the government). Toward the end of the book, the boy reflects upon this, and decides that this isn't as ridiculous as he used to think, and that he might end up doing the same thing himself. Finally, the third clue is that the lad was studying classical languages (Greek?) and found that it helped increase his mastery of Spanish (which he was taking in school).

The third book involves a computer which develops independent and original thought as well as the ability to feel emotions. After saving the Earth from someone using 'ignorant computers,' to do his dirty-work, the computer dies. This isn't much plot to go on, but I do recall a couple of small details, which may help identify the author and title. The narrator is male, a computer programmer (although he may not have been called that in the book's terminology), and can read punched paper tape as easily as you're reading this. He is greatly saddened by the death of his friend the computer, and searches for another "living" computer, but without success.

However, my favorite category remains that of the mystery novel. This summer I discovered the existence of Janwillem van de Wetering: and I read a good half dozen of his books. So far my favorites are The Maine Massacre, The Streetbird, and The Rattle-Rat.

At the moment I am reading A Thief of Time by Tony Hillerman. I have read all of Hillerman's mysteries, and for once I agree with the book critics -- this is a particularly fine example of detective fiction and of Hillerman's work in general.

Sue Grafton is another of my favorite mystery authors. I like her style, her feminism, and her wit. And for me, who can never remember titles of books (and only rarely author's surnames) I appreciate the way she names her books, namely, alphabetically. "A" is for Alibi, "B" is for Burglar, (I forget what C was, oh yeah "C" is for Corpse) and "D" is for Deadbeat. It makes my life a lot simpler when I don't have to keep rereading the backs and/or inside jackets to try to figure out the plot and whether or not I've already read it.

Someone last issue, or maybe it was the prior issue, was talking about reading William X. Kienzle's stories. His latest is Marked for Murder, and it is *very* good.

But, really, I wasn't going to tell you all that. What I started off thinking about mentioning was this year's reading agenda. Last year I spent reading the usual mysteries and the ever-popular (at least it is in my household) American Heritage. But, the majority of my time was spent reading computer and engineering magazines. This year I said "Enough!," and let all of the (computer) subscriptions lapse. And I signed up for one alternative press magazine. Which lead to me joining about 30 new (and New Age!) mailing lists, and looking through a whole new world of books, ideas, and ways of perceiving the world.

For example, I received a trial issue of a nudist magazine. I want to call it strange, but that would be a perjorative. But it most certainly *is* different. At the risk of sounding

sexist, I will say that all of the men (but not all of the women) who learned that I had a copy wanted to look at it. And from their expressions I gathered that although they weren't sure what they were going to see, it certainly wasn't the *boring* pictures of naked people at a picnic, and naked people bowling! I read it (it was mostly text, by the way), and I don't think I will subscribe. I can cope with the idea of nude beaches, parks, camps, etc., but I'm just not all that interested in nudism as a way of life. I most certainly do not believe that nudist behavior should be banned with legislation, or through the actions of some small-minded people. Naked people aren't going to do any damage to the environment that clothed people wouldn't do. And they aren't going everywhere trying to molest children or anyone else for that matter. But, from the articles I read, it seems that certain fundamentalist, as well as law-enforcement groups, think that nudists are out ruining parks, beaches, wilderness sites and certain rare/endangered species' nesting grounds. Not to mention that they are corrupting the morals of the nation's children. Which is about the opposite of the truth, since the articles I read were directed at people who worship the sun and the outdoors, who are trying to protect the environment. As for corrupted morals, none of these people was engaging in "loose behavior" (whatever that is). They were doing mundane things without clothes. And they are strongly feminist (not that Fundamentalists are pro-ERA and pro-Feminism). We are definitely not talking about naked women who exist only for the amusement of the men. If anything, the men had to be more concerned about the physical and well as emotional safety of the women involved. A woman who feels vulnerable is not going to take off her clothes. And if everyone is wearing clothes, then that park/beach/site is no longer a nudist park/beach/site!

Meanwhile, American Atheist has been sending me book listings, as well as pleas for tax-deductible contributions again. I'm somewhere between atheist and agnostic, but I really can't deal with these people. They seem to me to be hate-filled. I don't like censorship more than anyone else who truly loves freedom, but some of their crusades seem petty. For instance, one of their causes is devoted to the removal of the neon cross on a Californian church. According to American Atheist, the Cross is a sign. And local zoning laws limit advertisements to being of a certain height, which the church's cross exceeds.

In their approach, American Atheist tends to act very much like those religious people they insult. They have slogans. They tell their readers what to think and do. They don't let people differ; everyone is supposed to think, feel and believe the way they do because it is (obviously) the right-thinking way. It reminds me of a conversation I once had with a practitioner of Aliester Crowley's version of Magick concerning Satanists. As she pointed out, Satanists claim they don't believe in God, and yet their Black Mass is actually the Catholic Mass said backwards. So, by worshipping their God (Satan) they are also acting upon a belief about the Christian God (Christ). From my friend's view, neither god exists at all, and having a Mass backwards or forwards is silly.

How far is it to Fort Wayne, anyway?

One of the things Gabe and I did this summer was visit Fort Wayne, Indiana. We went there for a wedding. And, not knowing how far it was, and forgetting that they are in a different time zone, we ended up there a mere five hours early. Which was a great opportunity to explore. Our first stop was Fort Wayne's Foelling-Freimann

Botanical Conservatory. The conservatory is comprised of three buildings, each of which houses a different display. The first building is the one they call the showcase. It seems that six times a year the display is changed. When we were there it was full of flowers in bloom, as well as a couple of fruit trees (figs and limes, as I recall). It was hot, but the flowering plants were so beautiful I didn't want to leave. The next building contained tropical collection. It was really neat, but it was far too humid for those wearing going-to-a-wedding clothes. The Arid house was better, being arid, but we roasted in there too. Oh well, it was worth the suffering.

The construction of the buildings was interesting too. They seemed to be mostly glass, and as the brochure explains, the construction utilizes a closed loop convective system to meet 30% of their energy needs. Heat is pulled into rock storage beds for heating throughout the night and/or during cold weather. Thermal curtains are placed upon the windows to conserve heat when the temperature drops, and exclude heat when the temperature is too high. And, the building is also insulated by means of earthen berms.

Well, being as hot as it was, and inappropriately dressed, we didn't stay long. So, we had plenty of time left to explore the Fort Wayne Historical Museum. I particularly enjoyed the law enforcement display and the old drunk tank (which still smells bad). The displays on electronics and radio were quite interesting, and the small display on the early architecture of the city was my personal favorite. I think Gabe liked the stuff on Prohibition and the local German brewery better though.

The wedding was beautiful (ask Gabe about it sometime), and the reception was great, although hard to find. It was held at a converted schoolhouse in the middle

no-where, with nothing around but rows & rows of sweet corn. But it did have a wonderful 16-piece Jazz band that actually had the score for my favorite, "Harlem Nocture." And many other of our Big Band favorites...

Mailing Comments from Gabe

Dave & Susannah:

The Garage Sale Season has blessed us with a wide variety of furnishings. A new chair, a new stereo, an oak entertainment center and many small appliances. For the stereo and the entertainment center, we did not have enough cash on hand, so Audrey was left as collateral while I searched for a 24-hour money machine.

Buy more computers? Sounds fun. We just acquired a 5 user system and need to spend some time getting it in good working order. Then we might get a couple more modems and phone lines . . .

Greg:

You were right about garage (and estate) sales. Hopefully we will find a different hobby for next summer. Maybe we'll start having garage sales.

Mailing Comments from Audrey

Guy Consolmagno:

I've been thinking about you since your revelation concerning the Jesuits since I read your column. Best of luck to you!

Lastly and Leastly

The song Don't Worry, Be Happy has become my favorite mantra. I was busy worrying about something, started humming it, and actually overcame a weeks worth of sleeplessness. And even had happy dreams. The next day, I was upset about something at work, came home, got in the shower and sang that song. To my vast delight, this meant that I missed meeting the fundamentalists who came to my door and left their flyer while I was singing and getting wet.

"So to you I say, don't worry...be happy!"

TRANSPORTER
TOPICS

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Number 54

I have a good excuse! I didn't submit anything last time because (dramatic pause) I was busy writing something which will pay me "real money!" Yes, friends, Hero Games has agreed to publish the game manual I have been working on for so long. They returned my manuscript for a rewrite, which I finished late the night before I left for NolaCon, and also sent along two copies of the contract for me to sign and date. There may be one more rewrite, but they plan to have the book on the shelves by April. The company could still cancel the contract, but that is unlikely. They pay a \$200 advance on the royalties on acceptance, and another \$200 when they get the books from the printer. Royalty payments are quarterly.

WORLDCON

My first day at the con was a miserable one. Once again, my mother conspired to have me catch poison ivy shortly before a worldcon, although this time it was not a bad case. Then the airline (Delta) lost my big suitcase, which not only had all my clothes but my poison ivy medicine as well. Then the Sheraton told several hundred fans (me included) that their reservations couldn't be honored. It seems that a Southern Baptist convention had run two days over. ;The NolaCon committee should have used me as a liaison, since I belong to a Southern Baptist affiliated church.¿ Those displaced had their first night paid for by the Sheraton.

The combination of physical and mental troubles gave me a severe case of fatigue and re-activated my bowel trouble. I had to leave the GT party early and spend the rest of the evening in my room, about two blocks away in the Hilton. Oh, well, that gave me a chance to wash my shirt and socks and hang them on a chair to dry (no clean clothes, remember?). After a good night's sleep I spent the rest of the convention in moderately good health.

The second day, Delta delivered my suitcase to the Sheraton, the Sheraton got me a room (twice the size of the one I had at the Hilton and at half the price they charge) and the convention began in earnest. I saw several video tape and disc programs in the TV room and got to see the Wizard of Speed and Time feature film (the highlight of the con for me) in the movie room, meet many friends old and new, sit through a few panels (though I

missed two that I particularly wanted to attend) and ate some good food.

There were still problems. It rained all but the first and last days. Elevators and escalators kept breaking down. There was a false fire alarm early Saturday morning (which I didn't find out about until Sunday; isn't it wonderful how the Sheraton keeps its guests from worrying) which caused the hospitality suite to be evacuated. While wandering around downtown New Orleans at 5:30 AM, waiting for the all clear to be sounded after the evacuation, a friend of mine was mugged. It ended with the mugger sitting on the sidewalk in tears and my friend getting the knife as a souvenir. Sane people just don't attack someone who is 6' 9" tall, especially when they are carrying a quarter staff.

I wouldn't say that this was my worst worldcon. That was Boston. This one, however, was definitely not as good as it should have been. You know that scene from near the end of "Hell House" where they open the sealed room and find Belasco? I would love to see a still from that sequence, with Belasco sitting there in his chair, wearing his smoking jacket and holding the brandy glass, with the caption "Sorry for any inconvenience, your host," (signed) Emeric Belasco, Manager, Sheraton New Orleans.

Odds and Ends

I am going to interview for a new job with the state government, this one involving evaluation of software and hardware products, review of engineering projects involving computers and some other stuff. Sounds ideal for a generalist like me. The way I keep finding bugs in computer products, I'm a natural for the job.

Well, the drought is over. For a while there we thought we were going to have to start referring to Kentucky as the "browngrass" state. I just let my garden go for a while, then got a warning from the city about the weeds, so I tilled them under. Now I have this ugly patch of brown dirt, and no complaints. I preferred the weeds; at least they were green.

Have you heard of the Centaurs Gatherum Newsletter? At least two GT members (Phil Foglio and Mary Lynn Skirvin Johnson) are contributors. I hope to be. It is a fun 'zine, if limited in subject matter.

*%&%R\$!!! The "G" and "B" keys are sticking on my Amiga! Anyone have a solution? (It's probably clogged with cat hairs.) *%~*%~!!!

Although LexiKhan is no more, a group of students from the University of Kentucky is sponsoring a convention early next year. They will have Carl Sagan as a special guest, and hope to raise enough money to build an observatory for the UK Astronomy

department(!).

Why all this sudden emphasis on the greenhouse effect? I am not denying the possible connection of it to our weather of late, but everyone seems to be ignoring something. We have just entered one of the most active solar cycles on record, and we know that sunspots affect the weather.

I am finally transforming my back bedroom into an office. I have removed the wall-mounted desk installed soon after I moved in and am making room to put a more traditional workplace in.

Mailing Comments

Apa-Tech 59:

Shal (now GTB-III): Lexfa (the Lexington Science-Fiction and Fantasy Association) is run by a benevolent dictator. Whenever the current dictator gets tired of running things, he or she quietly lets that fact quietly be known. A bloodless coup then takes place, and the previous dictator becomes dictator emeritus.

Der Mann Von Druben: I like that title. In fact, I have used the last two words as the name of a villain in one of the games I referee. Seems this guy is from an alternate universe. * I am glad that I work and live in the same city. I commuted over thirty miles to college for five years, and that was bad enough, especially in a part of the country where we occasionally have moderately serious blizzards. * For making teas, I use a cylindrical Corningware pot my father found at a yard sale. It certainly beats the old aluminum coffee pot I was using. It is easy to clean; just rinse after it cools and wash later. *

Crumbcrunchers: I've got news for you; I moved four years ago and still haven't finished unpacking! (Oh, yeah, and congratulations on the new digs!) * I used to love peanut butter. Now I can only eat it if it is mixed with honey. *

Missile Command: Watch out for humidity in your basement computer room! * Re. Yr. Cmmts. Homosexuality: In the futuristic roleplaying games I referee (and in much of the SF I am writing) medical science has advanced to the point that things considered anomalies today are often adopted deliberately by faddists. Of course, knowing that such physical and mental alterations are voluntary and reversible makes them less intimidating to the hobbyists. Somaforming, i.e. changing your appearance for a thrill, is one of the biggest fads, and "Elvising" (adopting the form of a celebrity) is one of the biggest variations on this. Those of you who think that this is far fetched, remember the recent rise in plastic surgery for vanity purposes. *

Dr. Gonzo: Welcome back, Valli! * Most firearms have a microscopically thin, protective oxide coating which is impermeable, therefore preventing further reaction. The most common form of this is called "bluing" because of the color. This sort of process has been used for centuries, and is the origin of

the nickname of the British "Brown Bess" smoothbore, which used a brown oxide coating. Polishing actually removes the thin coating. Oil is rubbed on the metal parts of the gun to further deter rust. There are also more modern coatings, one of them involving Teflon. Of course, many contemporary firearms are made of stainless steel (including the internal parts) which generally needs no such treatment. *

Parentetical Perambulations: Your review of Lem's A Perfect Vacuum and the mention of the analysis of every sentence in a novel reminds me of a fantasy/dread I have. I am on a talk show or visiting a classroom after publishing a hit book, and some literary type proceeds to tell me just what I meant with every line, ignoring my protests that I meant what I wrote and nothing else! *

Cartography: We have a machine at work which uses a photographic process to produce map labels. It uses a series of microfilm discs to produce lettering in different type styles, with a mechanical adjustment to produce different sizes. This machine is only three or four years old, yet it uses this system instead of a computer-generated pixel image! The letters and words (printed on photo paper) are cut out, waxed and rubbed onto the master maps. * Yeah, I have seen "Special Delivery." It is several years old. *

Spring Lake: What is this with everyone going back to school? * Atlas is liquid-fueled, right? GD may therefore be getting some extra business the next couple of years, since the disaster with the solid fuel plant. *

Portable 'Zine: I hope you aren't planning to make a habit of this. * Your weather woes were quite funny, at least in retrospect. *

APA-Tech 60

Crumbcrunchers: Why is your handwritten APA more readable than Bill and Barry's typewritten one? (+: * Re. Yr. visit to the Air and Space Museum, I have twice "done" a major portion of the Smithsonian in one day. It was an interesting week both times. *

Dr. Gonzo's Sideways 'Zine: Re. Yr. Cmnts. on the synthesizer concert, I am currently working on a story where a musician is challenged to a duel by a young upstart. They battle back and forth for several minutes, each running through a difficult technical exercise and waiting to see if the other can duplicate it. The older man wins by suddenly switching to a deceptively simple theme from a piece of music he had previously made famous. The young guy finds that he can duplicate the notes, but can't make them sound right. The old pro then tells him "You have mastered your instrument. Now you must learn to make music." * "Horn muffler?" You mean, apparently, a mute. *

Der Mann: Did you know that American trains are still required to have a fireman aboard, even though they have had no fires to stoke since steam locomotives were replaced by diesels

in the forties? * I share your interest in deflating the various types of stuffed shirt who inhabit this world. *

Left Turn Guy: I hope your decision doesn't mean that you will be forevermore absent from these pages. In any case, good luck. *

Der Mann II: Heavy stone walls are very good at keeping radiation out. Unfortunately, old buildings are notoriously leaky, and may not keep the actual fallout from entering through the cracks. *

Find a City: Why does the Beatles' "I'm Fixing a Hole" keep running through my head (with little hobnail boots)? * Missed you at WorldCon. * Your franking about Challenger was shocking. Why haven't we heard about this stuff!? * On a related matter, did you see the "flame" that appeared between the external tank and a booster during the recent launch? Was that actually fire, or just a contrail effect, where the air is rushing through a constriction so fast that you get vapor? The glow would be explained by the vapor reflecting the exhaust flame. By the way, the Challenger crew could not have ejected. They could have bailed out, but might have hit the wing. *

Egads! Horrendous
whitespace! The light!
The light! Quick, celer,
I must flee!

Exclamatorially yours,

Rod

~ Parenthetical

Perambulations ~

more rumor & innuendo from

Annette Kavanaugh

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◆ ◆ ◆
yet more dispatches from the groves
of academe...

Yes, I will confess that I, who offered to be a Regular Contributor and to be faithful to ye old apa in sickness & in health, for richer & for poorer etc. (reminds me - I probably owe Greg some \$.), disappeared for some time over the summer. (But people will observe I did contribute a cover, so I suppose I am not a complete slug.) Anyway, for the duration of the Summer I was preparing for my written preliminary exams ("tell all you know about algebra, analysis & topology in 8 hours") so, although I had lots of stuff I wanted to write, it never did get past the outline stage.

parenthetical perambulations ~ 2

Now I am back in school and am putting off all serious outside reading until Christmas vacation. I did well on some of the exams but not well enough to get the whole passel of them out of my hair, so come spring break, I will be taking them the next (& last!) time. Hence I am feeling somewhat desperate, as my continued existence at the University of Minnesota depends on the outcome.

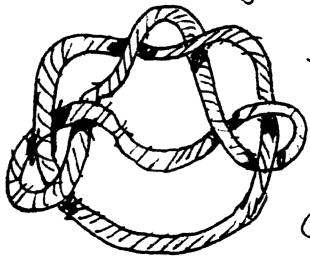
Life is better, at least in classes - I am taking partial differential equations, functional analysis and an algebraic topology/differential geometry course. The first two are SERIOUS second-year courses which require at least 50-100 pages of reading a week to be truly prepared (for math, that's a lot - i.e. it's 50-100 pages for BOTH classes.) The last course is just an introductory one ... but all three are fairly close to my actual interests & inclinations. (One of these days I will do a series of expositions about The Different Species of Mathematicians ... and give some interesting examples of the kind of stuff they work on.)

I have also been talking to some people at the Geometry Supercomputer Project at the Minnesota supercomputer center. No doubt a lot of you have seen the famous pictures of the Mandelbrot set

parenthetical perambulation

3

(which is an inhumanly complicated object) - anyway, if I ever get around to writing my essay on Mandelbrot's The Fractal Geometry of Nature, you will - The geometry supercomputing people are doing programs to generate nice pictures to model everything from minimal surfaces (think of soap bubbles) to knots (like the kind you tie your shoes with, but join the ends: e.g.



- actually this is a link, but it's close enough.) to various EXTREMELY strange things with complex analysis (imaginary numbers & their friends;

But of course, yours truly desires to get in on the action somehow - so she went over for a demo one day & asked them what openings there might be for grantlike critics of all orders - I'm really impressed at the things they can do - e.g. one of the demo pieces involved turning a configuration of eight stuck-together translucent soap-bubble things in space so you could see how it looked from all angles. Of course it is no surprise that the graphics are so gorgeous, as they have the best equipment money can buy (& some incredible Sapin's programmers...)

ps: for bibliographical nuts, the above figure is from Dale Rolfsen's Knots & Links, which has an

parenthetical perambulations ~ 4

appendix of knots & links, pictures of them, and lists of their various quantifiable qualities (e.g. number of crossings.) Anybody interested in having NIFTY THINGS TO TRY DRAWING might check it out.

promises, promises . . .

Real live mailing comments next time. For real. No kidding, folks. Also I will try to do some more book reviews (I have a list THIS LONG but this is being written at the very last minute. Having the editor in town allows one to push the deadline SHAMELESSLY.) Speaking of which, Andy & I are very happy to have Greg in town with us... in spite of the work load this is looking like a very good year for social life.

VALLI & JOA : I have really enjoyed the dispatches from other parts of the world, and the disquisitions on the Important Things in life, such as making a proper cup of tea. Eight a.m. breakfast on Saturdays with Sam & Bonnie this summer turned me into a coffee drinker, so I have bought the paraphernalia appropriate to my drug habit and have swiftly developed a keen interest in questions of technique... I have also enjoyed Joa's reminiscences about his

parenthetical perambulations ~5

introduction to Science fiction. The recollections of book lovers are at least as exciting to me as memoirs of love affairs or famous battles...

GABE & AUDREY: (This comment to Audrey, I think.)

Re your remarks on possible biological genesis of homosexuality: I lean toward a biological explanation as well, ~~that~~ with two important provisos:

(1) There seems to be a spectrum of "preference" - with a substantial body of bisexual people in the middle.

(2) No matter what the original "wiring" looks like (assuming that the underlying mechanism is biological & not purely psychological) sexual behavior in human beings is modified & directed by a daunting array of environmental influences - everything from early childhood experiences to the rules, (spoken & unspoken) which one learns in early adolescence.

I have very serious reservations about the whole idea of "curing" the "wrong" sexual preference in utero.

Ethically, I do not see homosexuality ~~as~~ per se as wrong. Coercive, manipulative, or exploitative sexual behavior is the real problem, not the gender of one's chosen partners. Ethically, I have deep reservations about trying to shape someone else's life without their consent - and I really do not like the whole notion of "re-making" those who are considered socially unacceptable. In the late forties and

parenthetical perambulations - 6.

early fifties, the fashion was for administering estrogen to homosexual men, with the idea of depressing the sex drive. This did happen, but the victims developed female secondary sexual characteristics (e.g. they developed breasts...) I say "victims" because many of these experimental subjects were offered the choice between jail (& disgrace) for having committed homosexual acts, ~~and~~ and "voluntary" participation in the aforementioned research. Very little was actually known about the effects of estrogen on adult men ~~at~~ when these programs were first proposed...

From a practical standpoint, I understand that the doses of most hormones are ~~just~~ in micrograms - e.g. birth control pills & therapeutic programs to reverse precocious puberty. In the womb the ^{effective} doses are even smaller. Does one dare experiment with this - I mean that even after trials with animals, who will volunteer their unborn child for such experiments?

In general, I am most disturbed by the current rage for biological explanations (and "cures") for almost every social phenomenon. I mean ~~that~~ not that one should eschew biological investigation, but that one ought not to reduce everything to biology, especially when most of the biology is so poorly understood.

parenthetical perambulations - 7

This is a very interesting debate, however - I am looking forward to more discussion.

BONNIE: I liked your cartography piece. (I also liked your New Mexico Van travelogue, many issues back.) You write great travel & popular-exposition pieces. Write more, or the natives [yaws truly] will get restless.

BILL & BARRY: The traveling typewriter lacked the glamour of computer typesetting but had a certain rustic j'en suis fier of its very own. (The jokes were good, too.) Good seeing you in Chicago, Barry. Just stay there long enough that we can see you some more.

parting shots...

Springer-Verlag, the great German mathematical publishing house, just had its infamous annual Yellow Sale (so named because all of the Springer math books have yellow covers.) I spent obscene amounts of money, & acquired several biographies of famous mathematicians. If I get a chance to read them over Christmas break, the first issue of 1989 will doubtless see reviews thereof... (The other stuff I got was pretty

parenthetical perambulations - 8.

nifty, too, but I have a sneaking suspicion that the general audience of this apa does not desire to be regaled with choice tidbits from Dynamical Systems on Surfaces or Matrix Groups.)

Also - I am hoping to come up with some Neat Stuff for general discussion. e.g. If you had a time machine, who would you want to talk to in the past? (I have a VERY long list.) What would you want to see? (We shall stop before we hit the question of what you'd like to change ...)

Andy promises (this to GRTG) that he really, truly will write something when things slow down a bit. Judicious nagging should help, too.

Annette Kavanagh

Uncle Bill Recommends Science Books

W. Skeffington Higgins

Conclave, in Ann Arbor, recently asked me to do a panel on “My Favorite Science Books.” (Actually, they asked me because the panel was my idea.) I’ve discussed some of this before in Apa-Tech, but I thought you might like to see this list too. Rules: Books I’d recommend to anybody interested in a subject. I have more technical favorites too, but I’ll skip them.

1 Names You Should Remember

Arthur C. Clarke. Isaac Asimov. Willy Ley. Stephen Jay Gould. James Oberg. Henry S. F. Cooper. John McPhee. Robert Forward.

2 Spaceflight (my favorite subject)

The Exploration of Space Arthur C. Clarke *Dates from long before Sputnik, but explains all the principles very well, and there’s a dash of Clarke’s poetic visions of the future.*

Rockets, Missiles, and Space Travel Willy Ley *Old but very lucid account of history and principles of rocketry. Especially good on the Heroic Age of rocketry in the 1920s and 1930s.*

The Illustrated Encyclopedia of Space Technology Kenneth Gatland, editor *Everything about astronautics in one volume, with fine pictures.*

Red Star in Orbit James Oberg *The best account of the Soviet program.*

“The Wind from the Sun” Arthur C. Clarke *This little short story tells you everything about solar sailing in about twelve pages. Found in the collection of the same name.*

3 Astronomy

The Universe Isaac Asimov *Best general introduction to astronomy.*

Intelligent Life in the Universe I. S. Shklovskii and Carl Sagan *Still the definitive book on little green men. Good astronomy and biology background here too.*

The First Three Minutes Stephen Weinberg *Not as easy to grasp as Weinberg thinks, but a good account of the Big Bang.*

The New Solar System J. Kelly Beatty and Brian O’Leary, editors *The best summary of planetary and space science in one volume, with lots of juicy color pictures and graphs.*

4 Chemistry

The Noble Gases Isaac Asimov *I picked this up at age eleven, asking, “How could someone write a WHOLE BOOK on this?” When I put it down, I knew a lot more chemistry.*

The Chemical Rubber Company Handbook of Chemistry and Physics *Useful for specialists, but fun to browse, too. Thousands of tables.*

5 Mathematics

How to Lie with Statistics Darrel Huff *A survival manual for the Information Age. How to tell when they’re trying to bamboozle you. Good cartoon illustrations.*

The Graphical Representation of Numerical Data Edward Tufte *Sounds dry, but isn’t. Good graphs, great graphs, liars, and Ducks.*

Flatland Edward Abbott *Grasping higher dimensions by contemplating lower ones.*

The Planiverse A. K. Dewdney *A worthy successor to Abbott; the puzzle of creating a more detailed two-dimensional world.*

Chaos James Gleick *Readable introduction to a hot new interdisciplinary study.*

The Eudaemonic Pie Thomas Bass *True story of student physicists who learned how to predict where a roulette wheel would stop.*

6 Computing

The Cartoon History of Computer Science Larry Gonick *Astonishingly informative. History, architecture, the RS flipflop.*

Hackers Steven Levy *The romantic view of computer people: brilliant nerds who can kludge anything and who live by the Hacker Ethic.*

Machines Who Think Pamela McCorduck *The people behind artificial intelligence.*

Computer Power and Human Reason Joseph Weizenbaum *Should we build AI if we can? Raises good questions. Also has a good explanation of the Turing machine.*

The Recursive Universe William Poundstone *Ever seen the computer game of Life? Proof that Life allows for universal computers and self-reproducing machines. If your graph paper is big enough.*

7 Physics

The Flying Circus of Physics with Answers Jearl Walker *Hundreds of fascinating questions about physics in the everyday world. Be sure to get the "orange cover" edition—it has the answers!*

From Atoms to Quarks James Trefl *A good guide to my business, the world of particle physics.*

The Making of the Atomic Bomb William Rhodes *The very best book on the most consequential event of our times.*

8 The Earth

The Silent World Jacques-Yves Cousteau *First invent a gadget that opens up a whole mysterious world. Strap it on. Then spend the rest of your life exploring.*

9 Biology

Borne on the Wind Stephen Dalton *Brilliant color photographs of insects frozen in motion. Alien yet familiar.*

Intelligent Life in the Universe I. S. Shklovskii and Carl Sagan *This one is double-listed under Astronomy because it has a good discussion of both the Universe and the origin of life, on the way to dealing with the eponymous topic.*

The Origin of Species Charles Darwin *Careful arguments buttressed with careful observations build his case, brick by brick.*

10 Social Sciences

The Worldly Philosophers Robert Heilbroner *Lives and thought of the great economists.*

Extraordinary Popular Delusions and the Madness of Crowds Mackay *We are not the first age to be gripped in craziness. Tulip madness, witch burnings, dancing manias, the South Seas Bubble.*

Fads and Fallacies in the Name of Science Martin Gardner *The definitive book on pseudoscience. ESP, Dianetics, astrology, Atlantis... it's all here.*

11 Scientists and Their Lives

Disturbing the Universe Freeman Dyson *A thoughtful, literate, and very imaginative scientist writes his memoirs*

The Curve of Binding Energy John McPhee *Ted Taylor, a former weapons designer, worries about the Proverbial Homemade Atomic Bomb.*

The Sleepwalkers Arthur Koestler *Copernicus, Kepler, and Galileo in one volume.*

A Random Walk in Science Robert Weber, editor *A collection of scientific humor. If you like this, there are sequels.*

Surely You're Joking, Mr. Feynman: The Adventures of a Curious Character Richard Feynman *Not a book, really, more like a long transcript of tape recordings of Feynman's stories. Bongos. Brazil. Safe-cracking at Los Alamos. Weird, wonderful, and supremely entertaining.*

On the Shoulders of Giants Robert K. Merton *A quest through all of Time and Literature for the source of Newton's aphorism. Many digressions. DANGER: This one is only for the very eclectic reader!*

12 Technologies

Profiles of the Future Arthur C. Clarke *1960s view of how the future will be. Source of Clarke's Three Laws. Hovercraft, comets, the disappearance of cities. Plus invisibility, shrinking, and other dimensions.*

Symbols, Signals, and Noise John R. Pierce *Hope you're not afraid of a little math. The principles behind communication explained.*

Engines of Creation Eric Drexler *Eric is the prophet of "nanotechnology," a revolution that may or may not come to pass. Very thought-provoking.*

Engineers' Dreams Willy Ley *Water the Sahara. Build ships out of icebergs. Drain the Mediterranean. Harness volcanoes.*

The Whole Earth Catalog Stewart Brand & friends *A great book for both dreamers and doers.*

The Media Lab Stewart Brand *We already have VCRs, satellite dishes, cable TV, home computers, BBS's, electronic mail, answering machines. What's coming down that pipeline in the Nineties?*

HALFWAY TO THE POLE

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(Commemorating the Fiftieth Anniversary of the Martian Invasion)

This is going to have to be fairly terse, since I've got two exams this week. I have indeed made it here to Minneapolis. The weather is lovely here right now, being warm and mild; that must be why they call it "the San Diego of the North." (When I came in July, it was more like "the New Orleans of the North.") It's that time of year when the trees change their fractal dimension and the squirrels run rampant. (I've discovered that, at least in the University sector of Minneapolis, squirrels fill the ecological niche usually occupied by rats.)

The move went about as badly as possible without its actually becoming tragic. I won't plague you with details, but suffice it to say that just about everything was either a panic or a struggle. Anyway, I made it to my sister's wedding, which was held outdoors, and the reception, visited my folks for a week, I've been settled in this apartment for about a month now, and the owner has **even** finally fixed up almost everything that needs attendance. The only major thing pending right now is that the movers have lost the one box that had a bunch of my desk items, all my cancelled checks and tax records, and all my notes and papers for my Mars work; this is the only daisywheel I have at the moment...

My erstwhile employers got all they could out of me in August, leaving essentially **no** time (that I was in any shape) to work on outside matters. I had one weekend to pack up the apartment and clear out. (A real motivation to succeed here: I don't want to have to go through that **again** for a few years.) As I mentioned last time, GD did win one of the Advanced Launch System contracts, so they threw themselves a "victory" party. I wasn't invited (ingrates) since I haven't been involved in that program since '86, but I got in as the guest of my friends in Flight Mechanics; not bad considering I'd already left the company four days earlier. The food was great, but it was obvious that GD had let the caterer choose the decorations, perhaps with the instructions to "do something futuristic." Giant cardboard cutout robots and BEMs greeted you at the door, huge aluminum-foil stars hung everywhere from the ceiling, the service people wore white coveralls, and the waitpersons wore metallic Jetsons-style outfits, boots, and headgear. The large ice-sculpture launch vehicle drew comments from some of us that it had at least as good a chance of flying as the real thing. I took photos because I figured no one would believe me when I told them about it. It was a fitting conclusion to four years' contact with the Crystal Palace...

What I'm doing now is trying to make sure I get through my courses well enough to encourage the Astronomy Department to want me to stay. I am taking a two-quarter sequence in statistical mechanics, a three-quarter sequence in classical physics (mechanics and electrodynamics -- old nemeses!), and various astronomy courses. The one for this quarter is in galactic astronomy. There are no exams; there is homework and a presentation. On December 2nd, I will be giving a twenty-minute talk on the "missing mass" problem in our Galaxy. Briefly put, 90% of the Universe is missing and no one knows where it went; it's making itself felt through gravitation, but we can't see what it is! Could make a nice **Pyro** article...

I will be at Windycon and hope to see some of you there.

P.S. Many thanks to Andy and Annette for Air frequent and willing to me since not here!

MAILING COMMENTS

APA-TECH 59 (continued)

Bonnie I liked your title. "...and orogeny is how it got there." How's your job going?

Rod The premise of "Changeling Earth" sounds similar to that of a computer game I've seen advertized in **AmigaWorld**. You return from an interstellar mission to an uninhabited Earth and have a limited amount of time to investigate what happened to everyone and why. Wasn't there a new "Twilight Zone" episode that played with this idea as well?

Cats may be only slightly smarter than gravity, but they are also **generators** of gravity. I've heard a story of an astronaut trainee or someone else taking a cat along on one of those parabolic aircraft flights that produce about fifteen seconds of weightlessness. He released the cat, which instantly went into panic and starting floating straight back at him, legs and claws extended...

On the matter of sending cargo ahead to Mars by slow trajectories or having supplies sit in orbit for a couple years, I see nothing fundamentally disturbing about that if a routine system of transportation and support already existed. I just wouldn't want to have to rely upon that cargo being intact, in good order and unspoiled, upon my arrival if I were on the first manned mission there.

Me I was just coming off a viewing of the recent re-release of "The Manchurian Candidate" when I wrote the colophon; it's a great movie if you're into paranoia and "dirty tricks." "How did the Russians turn into old ladies!?"

I got taken in by some of the hyperbole surrounding the promotion of the San Diego air show. It isn't the biggest in the **world**, but it **is** the largest in North America. Only somewhere over 200,000 people went, so the weekends were only pretty mobbed and I probably should have tried going. I'm told the site at Brown Field is pretty dusty and hot; San Diego County is not giving much thought to improving the area until after the planned 1990 show, provided it is a financial success.

Bill'n'Barry I enjoyed the running commentary and did my best not to get the two of you mixed up. The text certainly **looks** like it was produced in a car bouncing along the highways...

Nice to know that you now both speak Bocce... can you do anything about this balky moisture 'vaporator of mine? I like to think of the game as bare-handed croquet or a cross between horseshoes and shuffleboard.

APA-TECH 60

GTB I note that the rocket decals **also** claim to come from Spring Lake, New Jersey (unless it's **really** a packet of North Korean propaganda). Small world!

Susannah I hope Marlene was more impressed with **her** first airplane ride than my nephew was... After having been on the Metroliner and the Washington Metro, a flight at 15,000 feet over Megalopolis was apparently quite uninvolving; I'm told the subway was the big hit! I also concur in your observation concerning young children at the Air and Space Museum.

I can remember coveting an IBM mainframe when I was about nine. Who'da thought that, in twenty-five years, people I know would be talking about computer rooms in their homes?

It is my belief that the human body comes with a 30-year warranty, subject to the usual restrictions on abuse and unusual wear. After that, you have to do most of the work yourself to keep it going. ("...and it's so hard to get parts and there's no manufacturer-authorized repair shops...")

I just perused W. Daniel Hillis' book on **The Connection Machine** (he's the guy who mostly thunk it up); he acknowledges Heinlein as the person who made him want to go to MIT (probably after reading **Rocketship Galileo**, as Guy Consolmagno also declares). My first-read science fiction novel was either a Wollheim or delRey juvenile (they had such neat covers, so it seemed then) I got from our grade-school library when I was maybe eight. I think **Double Star** was the first Heinlein story I read, but that wasn't until I was perhaps ten or eleven; I have yet to read any of his juveniles.

Valli Margins, please! I'm glad you and Joa are having so much fun touring the Italian countryside. Knowing what a fan of architecture you are, I keep wanting to recommend a visit to Barcelona (having seen Teshigahara's (?) flim on Antonio Gaudí twice now), where there are a large number of surviving buildings from their early 20th-Century Catalonian-Art Nouveau movement.

I am definitely interested in finding out more about the Home and Studio tour for next year. The timing may be a problem, though, since I am already planning to be in Chicago during Memorial Day weekend for the Space Development Conference (which may already be a bad idea that close to the end of Spring Quarter...).

Joa Your comparison of rail versus air travel between cities in terms of personal time consumed probably goes some way to explaining why the Metroliner between New York and Washington, D.C. is the only part of Amtrak that actually shows a profit. (Unfortunately, train and air fares in the U.S. are typically about the same; in the exceptions, air is **cheaper**.) It is generally conceded that the Northeast is the only part of America where passengers trains make sense nowadays.

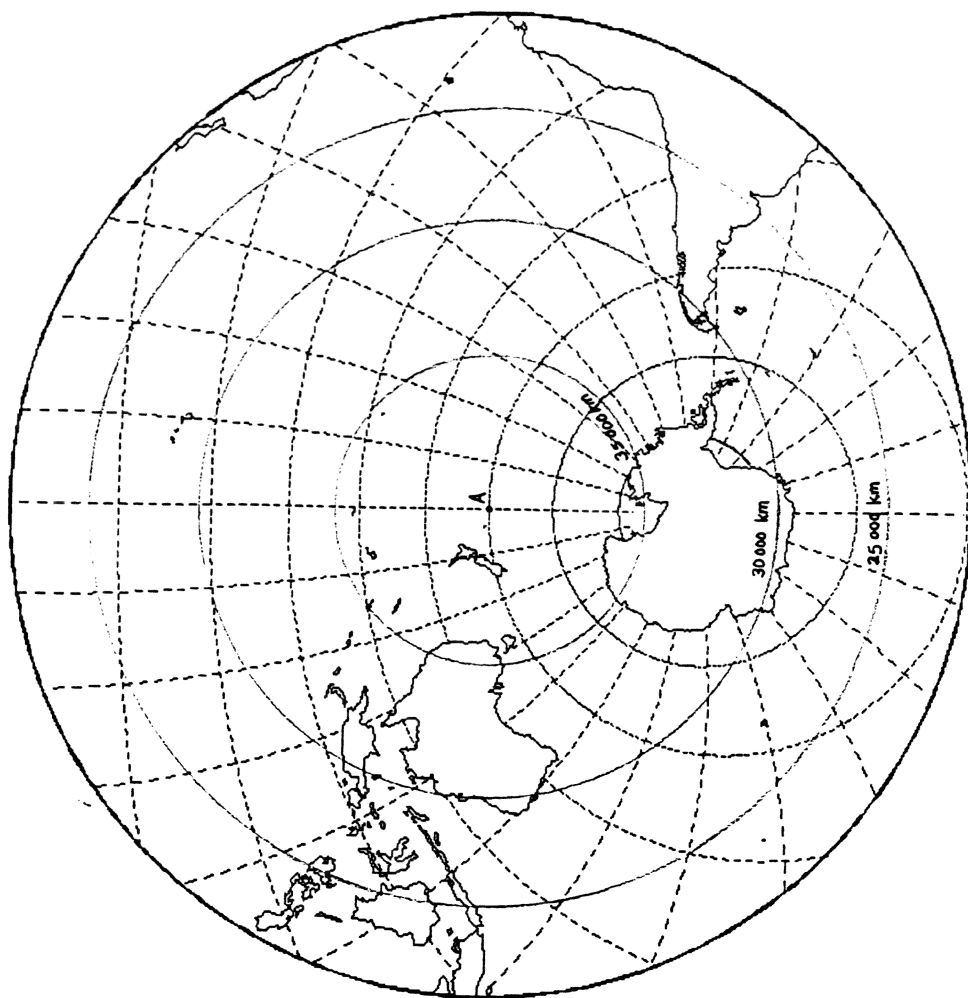
If several other people in this APA haven't already pounced upon it, I will simply say that you probably **have** read other works by "Anson MacDonald" without knowing it. Robert Heinlein's middle name was "Anson." As folks would say, you have good taste: the story is a classic and is widely reprinted.

Guy C. I hope your interview went well. If joining up with the Jesuits turns out to be what you've really been looking for, I'll be very happy for you.

I am pleased to note that Mildred Shapley Matthews has finally begun getting credit (albeit second billing) for editing the U. of Arizona series on the most recent books.

More Joa As a matter of chronology, at the time I spoke to Barry, I had only received one 'zine. I had quite a few more in hand by the time I got back from France, but with only five days left in July before I had to fly out here to look for a dwelling place, there was no hope of getting the issue out that month; my department was also squeezing all they could out of me for the last five work weeks I'd be around. (As it was, on my last day, I almost didn't get to the last desk in time to be discharged...)

As a step toward an isotemporal (isochronal?) traveller's map, I offer you one slice for idealized air travel centered on Milan.



This is called a stereographic projection, which preserves distances and true azimuth from the selected pole. This means that a straight line from the center to any other point traces the true great circle route from the origin to the destination. (This does **not** hold true between any other two points on the map.) Typically, this map is all plotted on one big circle, but the map program back at Space Systems wouldn't go out more than 90° from the center. Instead, I've made a set of two where the edges of one circle "wrap around" to those of the other. I've marked circles in 5000 km increments from Milan, which works out well since the Earth's circumference is about 40,075 km, so the edge of the circle is just over 20,000 km away. (Ignore the latitude and longitude lines; the map program sets them as degrees away from the **center**, so they don't represent standard geographical coordinates.) The little "A" on the second circle marks the antipode to Milan.

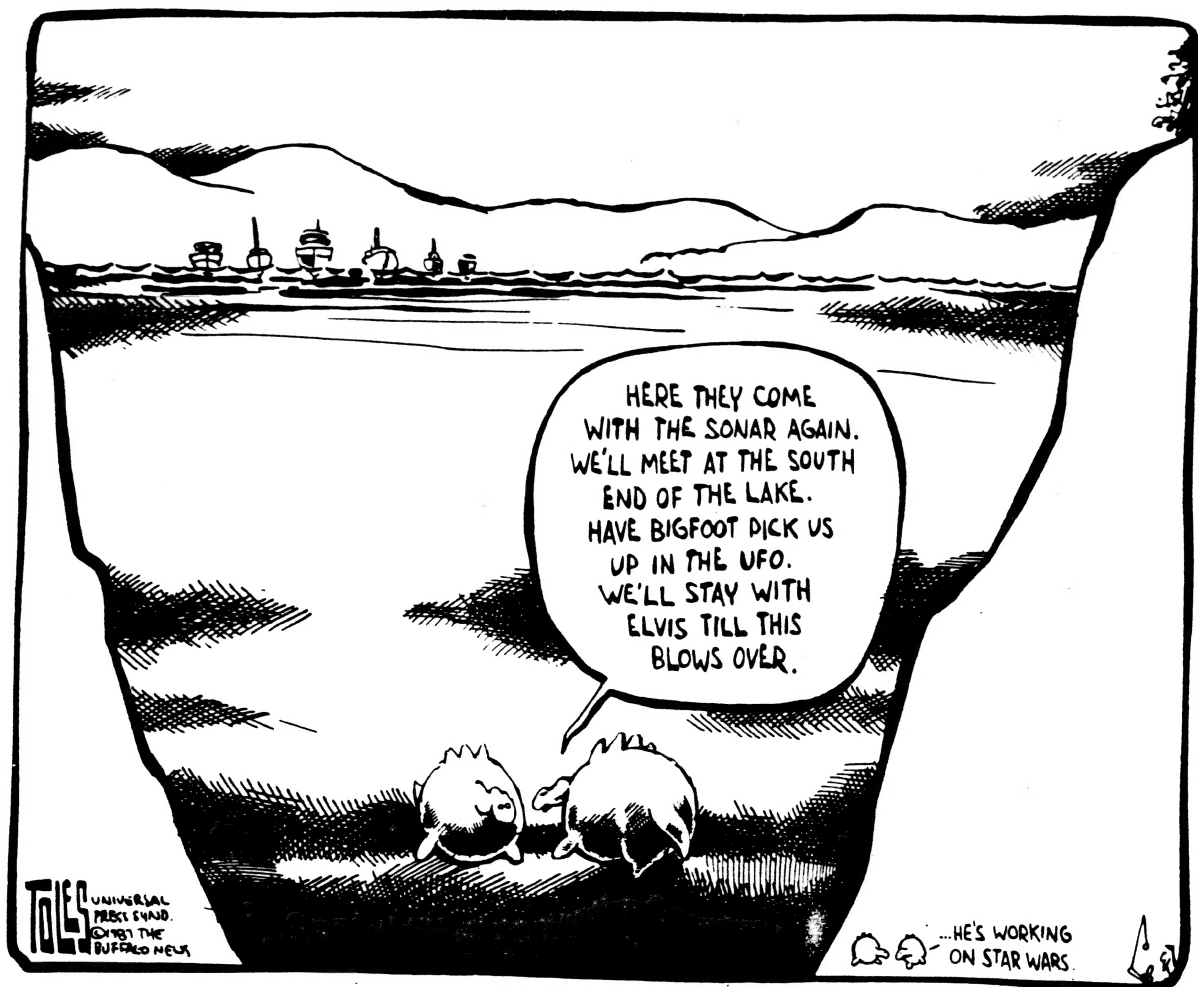
Valli again The plumber's friend being used by the Italian jazz player is in fact called a "plunger mute." I **think** it's an American invention, in that jazz players wouldn't have had the fancier mutes that orchestral brass players use. It comes in handy if you don't have a derby or fedora to put over the end of your horn...

Me I completely forgot last time to explain some of the frankings I tacked on last time. The article on **Challenger** came from **Defense Science** magazine for May, which I happened to stumble across at work. This article is what finally convinced me of the extent to which **Aviation Week** pulls its punches when dealing with the troubles of NASA and government contractors. (Not surprising, perhaps, in that it is basically a trade journal and McGraw-Hill must worry about offending its subscribers...) **Aviation Week** made very little of the remarks by Feynman and AbuTaha and has tended to restrict itself to the official NASA line and its accepted engineering solutions. The Phil Foglio drawing appeared in the program book for this year's San Diego ComicCon; I learned shortly thereafter that it is probably a study for the painting that was presented to our own Dr. Gehm as a congratulatory gift by the Chicago folks. (Why do I want to sing the "Anvil Chorus" when I look at this?) The article on Rocketdyne is reprinted from the British magazine **Space** and was being distributed for promotion purposes by Rocketdyne at their exhibit at the AIAA Annual Meeting last May. I put this in because it provides information on their various engines and on just how many of them are still around and flight-worthy; it indicates that I **was** wrong and that the information I'd heard from others at GD was wrong.

* * *

I've just a few frankings this time. The Toles cartoon is thrown in with Higgins in mind, knowing his delight in supermarket tabloid headlines. (We're still reeling from the implications of the B-29 found in a lunar crater and the giant Elvis statue on Mars.) The article on rail transit appeared in the 23 July **Minneapolis Star-Tribune**, as a further contribution to this APA's growing fascination with passenger trains. The last item came from the 28 April **San Diego Tribune**, in case you're wondering what to do the next time you're in Benson, Arizona with the warm wind in your hair...

I've stolen enough time from studying for now. See you at Windycon and here again in December. Take care!



Rail-transit debate grows as new systems open up

New York Times

Dallas, Texas

Five years ago, Dallas and its suburbs approved one of the nation's most ambitious transit plans, based around a proposed 147-mile rail system.

Last month, residents voted overwhelmingly to throw the whole thing out. Nearly 60 percent of the voters turned down a proposal to borrow \$1 billion for a revised \$2.9 billion, 93-mile rail plan.

In part, the vote reflected a lack of confidence in the administration of the existing local transit system.

But the matter also is part of a national debate about the wisdom and effectiveness of dozens of plans for bringing rail systems to the sprawling cities outside the Northeast.

To proponents, particularly downtown business leaders, the plans are a sign of increasing maturity as cities combat growing mobility problems.

But, despite the proliferation of new rail systems and proposals, many academics who study transportation and regional planning doubt that rail use makes sense in newer cities. A growing number say rail use is becoming urban America's leading boondoggle, providing inflexible, billion-dollar dinosaurs that fail to address the need for mobility.

"There are probably no markets for rail transit in American cities west of the Hudson River," said Peter Gordon, associate dean of the school of urban and regional planning at the University of Southern California. "Rail is the technology of the 1890s. It's part of the past, not part of the future."

Prominent critics at schools such as USC, Harvard, Carnegie-Mellon University and UCLA do not oppose mass transit. But they say improved bus systems, lanes on highways for buses only, and road management and pricing plans to increase the cost of driving are more effective and less expensive ways to reduce traffic congestion.

Such doubts have done little to slow the growth of rail systems.

Atlanta, Baltimore, Miami, San Diego, San Jose and Sacramento have inaugurated rail systems in recent years, while Dallas, Minneapolis and Houston have been planning systems. The Urban Mass Transportation Administration says 64 cities are planning or developing new systems or extensions of existing ones. Eleven new rail systems have opened since the mid-1970s.

The vast majority have come in well over budget, and most have not met ridership projections.

The 21-mile Miami system projected 200,000 riders a day and now serves about 36,000 daily. A recent study of the year-old Santa Clara system concluded that it would serve only half the 40,000 riders a day that were expected by the turn of the century. Portland, Ore., planners estimated a ridership of 42,500 people a day by 1990; it now stands at less than half the figure.

Atlanta, which has a heavy rail system, is below its ridership projections and has raised fares twice over the past few years, also raising fears that it will be priced out of the reach of low-income commuters.

Critics say there are few signs that any of the new systems have diverted a substantial number of people from driving cars. They say some systems will actually reduce reliance on public transportation by siphoning money from flexible bus systems to fixed, more expensive rail systems.

They also argue that rail plans show no understanding of the evolution of American cities, in which jobs are migrating outward along with population to areas rail cannot serve.

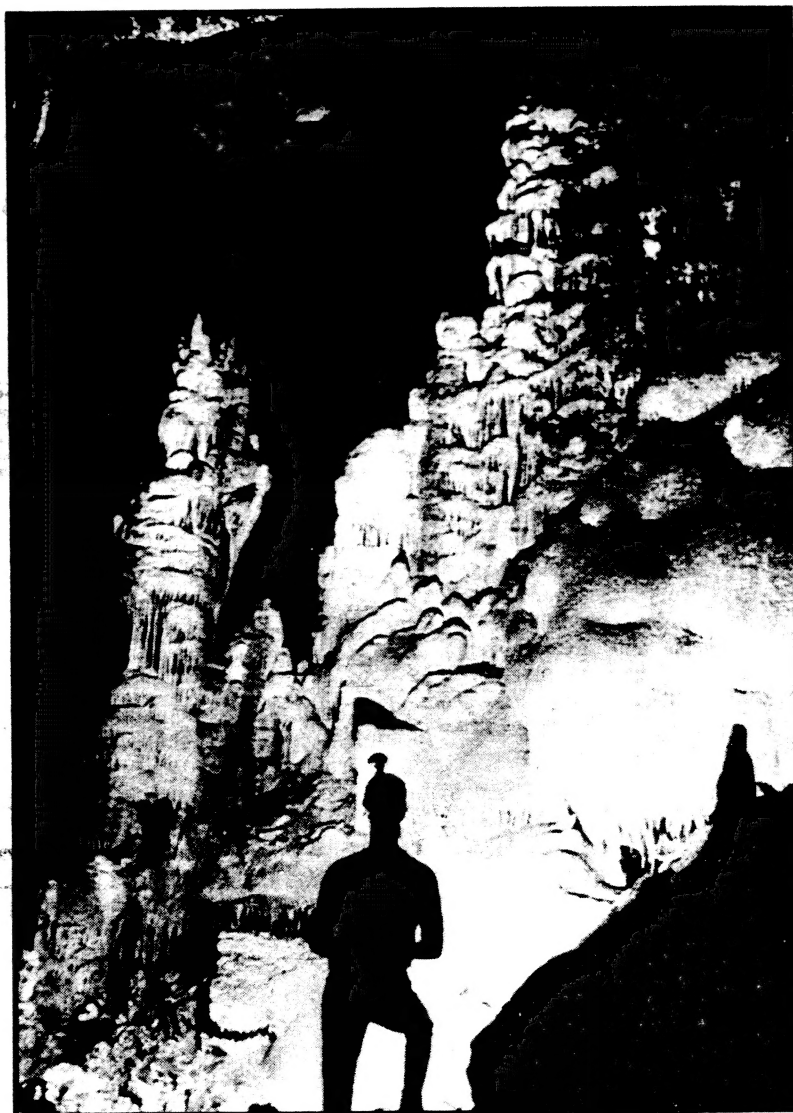
Proponents say it is too early to dismiss even the most troubled systems, since they are built to serve needs into the next century. Many note that high ridership projections were based on expectations of soaring gasoline prices. If gas goes back up, rail use would too, they say.

But critics say such talk is consistent with rail's history of promising more than it delivers, and that rail simply is inappropriate for spread-out, automobile-oriented American cities.

Rail advocates say much of the criticism represents short-term thinking that ignores the long-term economic and environmental effect that rail plans have on cities.

"When people say American cities have low density and so forth, they are correct," said Vukan Vuchic, a professor of transportation engineering at the University of Pennsylvania. "But we have rail systems serving areas with low densities more efficiently than bus systems. Rail is invigorating for a city. It's nonsense to say people don't want to ride trains."

Proponents point to the 70-mile Washington subway, the 20-mile San Diego Trolley or the 32-mile Marta system in Atlanta as examples of systems that have attracted riders and had positive effects on their cities. But most of these systems were built largely with federal money that has now all but dried up.



AP photo

ARIZONA'S HIDDEN TREASURE

A visitor views stalagmites and stalactites in spectacular secret cave

Arizona to purchase cavern kept secret since discovery

PHOENIX, Ariz. (AP) — The state that's home to the Grand Canyon and the Petrified Forest will soon acquire another natural wonder — a spectacular 2½-mile cavern kept secret for years for fear it would be vandalized.

The Arizona Legislature and Gov. Rose Mofford yesterday rushed to enact legislation allowing the state to acquire the cavern discovered 14 years ago near Benson in southeast Arizona.

The cave's existence had been a closely held secret since it was discovered in 1974 because its owners feared vandals would destroy its beauty.

The two-room cavern is about 7,000 feet long and from 50 to 100 feet high. Thousands of still-growing stalagmites and stalactites ranging from a few inches to 60 feet are found throughout.

In three years, about 100,000 to 150,000 people a year will get to travel by elevator to see the cave, said state Park Board Director Kenneth Travous. Officials plan to use state park revenues to acquire the site for \$1.6 million within a year from the Arizona Nature Conservancy, which will buy the site from the family of the late James Kartchner, a Cochise County rancher and educator.

